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ABSTRACT

This handbook on conducting research was written for school social workers and contains these articles: (1) "The School Social Work Practitioner and Research: An Overview" (Elizabeth Timberlake and Lewis Carr); (2) "Defining Empirically Based Practice" (Deborah Siegel); (3) "Future Research in School Social Work Services: An Update" (Christine Sabatino, Elizabeth Timberlake, and Sally Hooper); (4) "Assessment in Groups" (Sheldon Rose); (5) "Assessing the Effectiveness of School Social Workers: An Update Focused on Simulations, Graphics, and Peers" (Norma Radin); (6) "Human Subjects Guidelines for School-Based Research" (Ruth Ratliff); (7) "Interrupted Time Series Design and the Evaluation of School Practice" (Paula Allen-Meares); (8) "Single-Case Study Designs Revisited" (Eileen Gambrill and Richard Barth); (9) "Single-Subject and Group Designs in Treatment Evaluation" (Srinika Jayaratne); (10) "Survey Research for School Social Workers" (John Alderson and Curtis Krishef); (11) "Evaluation of Performance: Where Does It Fit In?" (Norma Radin); (12) "Individualized Educational Programs as a Tool in Evaluation" (Jean Campbell); (13) "Program Evaluation in School Social Work" (Alvin Flieder); (14) "Content Analysis: It Does Have a Place in Social Work Research" (Paula Allen-Meares); (15) "Applications of Content Analysis to Social Work Practice in Schools" (Paula Allen-Meares); (16) "Qualitative Research as a Perspective" (Roy Ruckdeschel); (17) "Qualitative Research Methodologies" (Tony Tripodi); (18) "The Ethnographic Interview as a Useful Tool for the School Social Worker" (Ron Roberts and James McCullagh); (19) "Using the Library in Practice-Based Research" (Stanley Lyle); (20) "Conducting Research Through Online Computer Databases" (Susan Schrader); (21) "School Social Work: A Bibliography of Books" (James McCullagh); (22) "A Bibliography of Resources for Research" (James McCullagh); (23) "Information Technology in School Social Work: New Challenges for Professional Practice" (Marilyn Flynn); (24) "The Application of Microcomputers in Social Work Research" (William Callahan and Sharon Smaldino); (25) "The Art of Preparing and Securing Grants" (Nora Gustavsson); (26) "Overcoming Obstacles to Publication" (James McCullagh); (27) "A Guide to Professional Publication for School Social Workers" (James McCullagh); and (28) "The Process of Writing Journal Articles: A Personal Statement" (James McCullagh). (NB)

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# Conducting Research:

# A Handbook for School Social Workers

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# CONDUCTING RESEARCH:
# A HANDBOOK FOR SCHOOL SOCIAL WORKERS

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Dedicated to
school social workers past, present, and future
who labor on behalf of students with special needs
that they too may achieve their potential and realize
their dreams, hopes, and aspirations

# FOREWORD

School social work has come of age in Iowa. Over 200 school social workers are now employed by the Special Education Divisions of Iowa Area Education Agencies. The AEAs have worked for over a decade to develop a comprehensive range of support services to assist local school districts in their efforts to identify and appropriately serve handicapped children as mandated by Public Law 94-142. The inclusion of school social work in the development of these services has recognized the unique and valued contribution of this practice specialty.

Though much has been accomplished, much of the motivation for developing this handbook has grown out of a concern for the future of school social work. To a great extent decisions for the continual development of school social work programs have been based on the assumption that school social workers are effective in mitigating the social barriers that impede students' educational achievement and success. There is, however, little in the way of an adequate, school social work specific, empirical foundation upon which to base this assumption. An urgent need exists to substantiate and document the effectiveness of school social work interventions in removing barriers to learning and positively affecting students' social and academic performance.

The need to develop an empirical base specific to school social work practice is especially critical at a time when the attention of the legislature, the Department of Education, AEAs, and local school districts are focusing increasingly on the qualitative aspects of special education programs. We have spent a decade establishing and developing the structure, processes, and procedures of a system to deliver special education in Iowa. We have identified students in need of special education programs and have developed instructional and support services to address those needs. Attention now is turning to the results of these efforts. To withstand this scrutiny, school social workers must gather adequate empirical evidence to demonstrate that services in fact do make a positive difference.

This does not mean that school social workers need to become full time researchers. Rather, what is called for is a more comprehensive integration of research into practice. To this end, the handbook is offered as a guide and resource. Its utility primarily will be judged by the extent to which you, the practitioner, use it and find it helpful.

Jim Clark, ACSW, LSW

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# PREFACE

The purpose of this handbook is five-fold: (1) to provide an overview of the research process and related topics; (2) to demonstrate its applicability and usefulness to school social work practice in the schools; (3) to re-educate practitioners to think in terms of consumers and producers of research; (4) to minimize the anxiety and disenchantment that have often been associated with research efforts; and (5) to provide information, ideas, support and encouragement for practitioners to do research and to share their research and practice wisdom with the larger community of social work professionals and others.

The need for visiting teachers (social workers) in the early 1900s has steadily expanded as our society dramatically has increased in diversity and complexity. The complexity has brought with it social change and the eventual recognition by Congress and the people that all children have a right to equal educational opportunity. Since the 1975 historic passage of P.L. 94-142, The Education for All Handicapped Children Act, and its subsequent implementation throughout the United States, school social workers have performed significant services for children and youth thereby continuing a tradition of professional service since the beginning of this century.

School social workers are key members of the cadre of school professionals who work to provide all children with a free and appropriate public education and necessary related services. School social workers offer assessment and intervention; teaming and collaboration with other support staff, teachers, and administrators; and, importantly, provide an essential link between the school, home and community.

As a field of practice school social work is very diverse, encompassing a great variety of tasks performed by practitioners across the United States. Some school social workers are closely aligned with special education by working with handicapped pupils and their families, while others tend to the needs of the mainstream population (including underachievers, truants, victims of child abuse, and other students at risk). Regardless of the responsibilities assigned to the school social worker, knowledge about the full range of research methodologies is considered essential for its survival and future development of the profession.

Though school social work practice began in 1906, it is still a fairly new field. Its advancement is dependent upon a solid knowledge base that includes the development of theory and research useful for directing practice and educating professionals. School practitioners can conduct research to demonstrate individual practice and program effectiveness; to identify policy issues affecting schools, children, and professionals; to recommend policy and law; to analyze and assess models of intervention; to assess educational and social need; and generally to identify and select topics appropriate for further research.

This book provides social workers employed in educational settings with knowledge about various aspects of research and the value of integrating research into their daily practice to achieve a high level of performance while demonstrating accountability. Schools and their personnel are currently under close public scrutiny. Fiscal pressure is also increasing the demand for accountability. Recent state and national reports on the status of education are demanding that the school as an institution be more accountable to the public. Therefore, school social workers should regularly and systematically provide evidence that they are indeed an effective service, contributing significantly to the educational enterprise.

For too long, social workers have viewed "research" as a responsibility of academicians, having little importance or relevance to social work practice. It is our firm belief that this view has hampered and undermined the development of knowledge derived from empirical data specific to social work practice. Practitioners have much to offer in developing a solid knowledge base for the profession. Increasingly, it is the professional responsibility of social workers to incorporate principles of research into their practice and to provide evidence of effectiveness and efficiency.

Some school social workers may question the need to do research.

Several compelling reasons exist for such efforts. Besides knowledge development, mentioned earlier, practitioners need to know how effective they are in achieving social work and agency goals on behalf of clients. Data provides valuable feedback about the outcome of one's efforts. This knowledge is essential for defining and redefining practice objectives, selecting and modifying intervention, and developing plans for continued service.

Although social workers may feel with some justification that the outcomes of their work are not always visible and immediate or measurable, there is a danger that this position can become an excuse for inaction. In our opinion, a profession that does not evaluate itself runs the risk of being excluded from the educational enterprise, particularly when budget reduction is required. Social work services in schools may be particularly vulnerable to reduction when fiscal crises arise, because the service has traditionally been viewed as secondary. In the present fiscal climate, to ignore the opportunity of providing data on the outcome of services with individuals, groups and programs that target specific populations and to rely upon impression and merely subjective accounts harm our professional status. As stated earlier, practice and research are not and should not be viewed as polarized efforts. They are part of a single process--the helping process.

## Research on School Social Work Practice: Getting Started

This handbook is organized into four sections. The first section makes a case for the importance of research in school social work practice. It offers an overview of the research process, defines empirically based practice, then presents a rationale for selecting problems for study, suggests guidelines for measuring problems, and presents a consideration of ethical issues. Some of the more recent methodological issues found in the literature are also discussed. Current issues related to the usefulness of quantitative and qualitative methodologies, and the importance of triangulation in terms of data sources and methodologies are also explored.

For example, Timberlake and Carr call attention to the school social worker as both practitioner and researcher and why research is important. In the chapter entitled, "Future Research in School Social Work Services: An Update", six areas of research, warranting attention are identified. In another chapter, Radin offers an evaluation paradigm and presents different types of measurements which school social workers can readily include in their daily practice. Ethical issues encountered in social work practice and guidelines for protecting human subjects are explicated by Ratliff.

Whether they know it or not, school social workers are constantly engaged in the research process. When school social workers collect information about a pupil's family, conduct a social-developmental study, or review attendance records, their efforts could be considered steps in a data collection process which could lead to viable research. When they engage in classroom observation or ask for feedback about pupils after having provided services or intervention, their activities could be considered part of the research process.

Considerable breath as well as specificity exist in the kind of research procedure or method one might employ. The central issues in this regard are research questions concerning the purpose and intended use of the desired information. If practitioners want to generalize their findings beyond a specific client, then the rigor of the research methodology employed for controlling for alternative/ plausible explanations as well as the external validity become more important. Incorporating and modifying the content of this book into each practitioner's own frame of reference, practice situation, and needs will facilitate the development of a knowledge base useful for social work practice in the schools, now and for the future.

## Methods of Social Work Research

This section is concerned with how to select a research method or approach, given the focus of the inquiry and the kind of information sought. While research often does include statistical analysis, a most important aspect of the process, the editors did not include a chapter on statistical analysis because of the breadth of the topic. Instead, a list of references specific to various statistical applications employed in the research process is contained in the chapter, "A Bibliography of Resources for Research."

What the reader will discover in this section is the wide selection of available research methods and designs and their application and appropriateness for various research questions. Essentially this section is divided into several subsections: single subject and group designs, survey research, evaluation research, content analysis, and qualitative research. Chapters included under the various subsections attempt to explain and describe a particular methodology as well as to illustrate its applicability to a variety of social work concerns generally, and school social work, specifically. These chapters also go beyond merely discussion of how one could employ the methodology, they also include an analysis of strengths and weaknesses. In particular the chapters on interrupted time series and single-case study designs provide wonderful critiques and helpful directions.

Procedural steps for conducting survey research and content analysis, and how the Individual Educational Program (IEP) can be used as a tool in evaluation are just a few of many topics explored in this section. Last but not least, qualitative methodologies including the ethnographic interview are described.

In a setting like the school, researchers encounter many extraneous variables that are beyond their control. Frequently the practitioner-researcher is dependent for project execution upon the cooperation of those within the school; this cooperation can be inconsistent at times. Considering the difficulties inherent in the undertaking, readers will find the content in this section most useful for successfully facilitating their research agenda.

### Resources for Research

Section Three addresses a central concern of practitioner-researchers, that is, how to gain bibliographic mastery of the literature affecting one's research and writing. The "knowledge explosion"--a proliferation of journals, books, government monographs, ERIC documents --has affected the social work profession by making it increasingly difficult to stay current in one's area of practice. School social workers often need information from a variety of professions and disciplines in the social and behavioral sciences. Ongoing use of libraries and media centers and access to bibliographies will allow one to obtain relevant literature.

The chapters in this section provide the necessary guidelines and resources to achieve such an objective. The first provides an overview of university library services and available resources. The next chapter presents an extensive listing of online computer databases and details how one may easily access these sources to discover and obtain relevant literature. Though the author is addressing Iowans who are employed by Area Education Agencies, the process of requesting and conducting a search will be similar in libraries across the country. Two bibliographies are included. The first consists of a bibliography of bibliographies and a listing of books and government documents to acquaint the reader with most of the extant school social work literature. The other bibliography lists some recent text and professional books pertaining to selected facets of the research enterprise and supplements the references found at the end of each chapter in this handbook.

Two chapters discuss computer applications to social work practice. One "examines trends in the development of computer and communications technology from the perspective of core school social work functions". The second suggest specific applications, including word processing, database and spreadsheet programs, and computer-assisted instruction. They also provide extensive information about software resources and the use of computers or data collection, information storage, data analysis, and graphic display.

The "Art of Preparing and Securing Grants" concludes this section. School social workers have opportunities to obtain grants through their educational district, cooperative, or agency; state department of education or other state agency; or an agency of the federal government. Knowledge of the "art" can lead to grants, which will facilitate practice innovation and provide the necessary support to conduct research.

## Writing for the Profession: Dissemination of Research and Practice Knowledge

An important goal of the profession and one intent of this handbook is that more practitioners share their professional discoveries by writing for publication. It is easy to encourage school social workers to write, but it is equally important to recognize that their practice is often demanding and stressful. It is a world--at least during the academic year--that allows little time for writing; yet, the plea repeatedly is made to practitioners to research and write. School social workers indeed have much to offer; they are the ones who provide professional services. It is their knowledge, understanding, and practice expertise that are so eagerly sought by other practitioners and academicians. School social workers are the front-line interventionists in our society. They are the professionals who witness the germination and first-stage growth of personal and social problems.

Conducting research and writing is often perceived as very difficult, time-consuming, and expensive. These and other obstacles to conducting research and writing can be overcome. Writing is a solitary activity and can be painful, but there are rewards once the work is successfully completed.

Three papers are devoted to the process of professional writing. The first addresses obstacles that practitioners may face and suggestions to overcome them. The value of coauthors, writing support groups, and joint-work programs are presented. The second paper is a guide to publication: getting into print, selecting a journal or other form of publication, and understanding manuscript evaluation from the editor's perspective. The third is a personal statement about the writing process itself--from ways to begin to endings.

## Goals of This Handbook

Goals of this handbook are multifaceted: (1) that more practitioners conduct research and write for publication; (2) that schools of social work continue to educate graduate students for such endeavors; (3) that the profession support such research activity by practitioners; (4) that agencies provide time and resources to allow such activities to occur; and (5), most importantly, that school social workers render professional services based on appropriate knowledge and skill to meet the needs of clients--children, families, schools, and communities. In summary, this book is intended to faciliate the integration of research and practice into more of a unitary process that for too long has been artifically divided.

Paula Allen-Meares
James G. McCullagh

# ACKNOWLEDGMENTS

To our knowledge this is the first resource handbook written to assist and facilitate practitioner-oriented research in the specific practice of school social work. It is hoped that individual practitioners, school social work programs, and the discipline as a whole will benefit from its application. Our ultimate goal is toward a stronger empirical base for professional interventions that will lead to more efficient and effective student learning and development.

The Coordination and Review Committee, which guided the composition of this handbook, would like to recognize the many efforts leading to its publication. Special credit goes to Jim McCullagh who, following completion of the book School Social Work Interventions with Behaviorally Disordered Children: Practical Applications of Theory in 1987, recognized the need to further develop research in school social work. He wrote the initial grant proposal, and involved the Coordination and Review Committee and Iowa School Social Work Consultant to further refine the proposal which was then approved by the Iowa Department of Education. Through his tireless, meticulous efforts in editing and coordinating with Paula Allen-Meares, we have completed a volume of which we hope Iowa can be proud. We are particularly pleased that Dr. Allen-Meares joined us, adding her expertise to our project.

We also wish to acknowledge the work of Jim Clark, who finalized the funding proposal and managed the total project. A special thanks is extended to Iowa's supervisors of school social work programs across the state. They provided ongoing input and support. Appreciation is extended to Cheryl McCullagh and Mike McKinley for their editorial assistance and to Oletha O'Donnell, who was always available to type every word in this book with grace and accuracy. Area Education Agency 7 generously provided facilities for us to hold several weekend committee meetings.

The editors commissioned practitioners, academicians, and others to write chapters specifically for this handbook, and, in addition, selected articles that have been previously published in social work journals.

We appreciate the willingness of these journals which allowed articles to be reprinted in this volume. A special thanks goes to the authors who shared their expertise and participated in making this book a reality.

The Coordination and Review Committee
Ronda Armstrong, ACSW, LSW
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# SECTION ONE

# RESEARCH AND SCHOOL SOCIAL WORK PRACTICE: GETTING STARTED

# THE SCHOOL SOCIAL WORK PRACTITIONER AND RESEARCH: AN OVERVIEW*

Elizabeth M. Timberlake and Lewis W. Carr

ABSTRACT: This chapter explores the knowledge development and evaluative functions of social work research and grounds the task of selecting research problems in the context of school social work practice today. It discusses quantitative and qualitative research designs, measurement issues, and issues related to using findings from the practitioner-researcher's own research as well as the research of others.

In the coming decade, school social workers will continue to be confronted by a number of issues related to the enhancement of their professional practice. They will encounter critical questions about social work practice in a host setting, teaching and learning problems, the cultural and psychosocial dimensions of family functioning, institutional racism and sexism, the balance of remedial and preventive services, the balance of direct and consultation services, community development, and so on. School social workers will be challenged by urgent priorities in their own specialized practices: the various handicapping conditions identified by P.L. 94-142, child abuse, addiction, AIDS, violence, and teenage pregnancy, among others. In addition, they will face pressing questions about increasing professional accountability and effectiveness through use of quantitative research techniques as well as increasing cost effectiveness by adopting whole sets of computerized management systems such as Management by Objectives (MBO).

Indeed, the one certainty for school social workers today is that their professional practice is changing (Timberlake, Sabatino, & Hooper, 1982). The conceptual frameworks that define and give direction to social work and its specialties continue to evolve. The literature portrays differing perspectives of the profession's purpose, values and goals, the widening range of knowledge necessary for practice in the psychosocial domain, the increasing diversity of practice roles and tasks, and the multiple intervention technologies and processes available ("Conceptual," 1977, 1981; Saari, 1986; "Social Work," 1982; Timberlake, Sabatino, & Hooper, 1982). There is movement toward coordination of comprehensive social services within and across fields of practice, management of service delivery through computerized information systems, and increased accountability to consumers and funding sources (Fanshel, 1980; Rubin & Rosenblatt, 1979; Thomas, 1984). Yet simultaneously, today's political and economic climate emphasizes self-sufficiency of communities, institutions, families, and individuals. Thus, there is also pressure for fewer and more cost-efficient social services in the face of growing need. Although the long-range outcomes of these progressive and regressive forces are not predictable, the pressures and changes serve a positive function by emphasizing the key role for research in school social work's future.

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*This chapter is an expansion of a paper published in Social Thought, 1982, 8(4), 22-37.

## Functions of Social Work Research

In the academic disciplines, the primary research function is developing knowledge for its own sake. By contrast, research in the service professions has two primary functions: (1) developing conceptually meaningful knowledge for use in practice, programming, and policy decisions; and (2) evaluating services and policies not only for effectiveness and efficiency but also for acceptability and accessibility. Although a particular study may emphasize one of these functions, most social work studies serve the dual purpose.

### Developing Knowledge for Use

To enhance its practice, the social work profession continues to develop its own theory base. In so doing, the profession is examining and reformulating those fields of practice, psychosocial problems, intervention goals, change processes and practice tasks unique to social work as well as those shared with other professions. As professionals whose expertise consists in:

> knowing, organizing, and applying a wide range of knowledge about people, [social work practitioner-researchers] formulate and test conceptions which contribute to both theory and practice. It is the selection, organization, and testing, using the methods but not

> necessarily the theories of scientific disciplines, which is the key activity. (Tabor, 1969, p.148)

The sought after ideal in developing knowledge for social work is to build an information base that: (1) draws from the profession's theory and practice traditions of a simultaneous dual focus on person and environment and empirical databases addressing persons, environments, and the match between the coping behaviors of persons and the qualities of their impinging environments (Gordon, 1983); (2) draws selectively from the theoretical frameworks and empirical databases of the physical, social, and behavioral sciences as well as the humanities; (3) seeks to understand problems and solutions from a multidimensional stance; and (4) focuses on obtaining substantively meaningful knowledge that is grounded in empirical observation. Within this broader context, school social work is developing its own specialized knowledge base through studying social work practice in the context of the goals and functions of its host educational institutions.

## Evaluating Professional Services

Social workers are equally concerned with evaluating various aspects of the profession, its fields of practice and its service delivery systems. The National Association of Social Workers (NASW), social work specialty groups, and licensing boards concerned with standards and consumer interests are assessing both the qualifications and effectiveness of social work practitioners. In addition, school social work divisions are conducting formative and summative evaluations of the effectiveness of their policies and programs. Increasingly concerned with their own practice as well as with their collective service programs, individual school social work practitioners are exploring the parallels between practice and research methodologies and processes. That they are coming to terms with the notion of practice evaluation as a form of professional self-surveillance is simply one dimension of their increased self-awareness.

When knowledge by-products of these evaluative studies of professional services are reviewed, their contributions to knowledge become apparent in several areas. Evaluation of practice activities and treatment processes as related to specific problems and outcomes supports explication of approaches to social work intervention that are: (1) multidimensional and oriented to the complexities and context of practice; (2) conceptually meaningful and based in appropriate theoretical frameworks; (3) systematically formulated; and, to the degree that the nature of the practice problem/person/situation permits, (4) oriented to the rigors of research evidence. Evaluation of programs results in data about client characteristics, the value base of the program, and any changes achieved. Evaluation of the effectiveness of practitioners provides information about the personal as well as the professional qualities of successful intervenors. Evaluation of individual practice also provides information about practice processes, techniques, and biases. A note of caution is in order, however, since not all program and practice evaluation activities are conducted in the light of their relevance to an appropriate theory base.

Program evaluation also connotes the possibility of going beyond conventional assessment of known social work programming and methodology and moving toward generating innovative models of intervention; that is, toward the research and development model. The shift to this evaluative paradigm is accomplished through identification and analysis of the practice problem of concern, a "state of the art" literature review, the construction of a research and development design, and a feasibility or exploratory study prior to full-scale field trial. Thus, in this instance, evaluative and self-corrective measures are built into the service plan from the beginning.

### Role of the Practitioner in Using and Developing Knowledge

More social workers today are professing a high regard for research and as a result, are conducting more and more research. Yet the use of empirically based knowledge remains a complex phenomena. Various studies report that social workers seldom use research studies to guide their practice (Casselman, 1972; Rosenblatt, 1968; Rubin & Rosenblatt, 1979). When asked where they turn for help with a difficult practice problem, most say they turn to supervisors and colleagues rather than to research findings (Kirk, Osmolov, & Fischer, 1976; Rosenblatt, 1968).

In a practice-oriented profession, it is clear that practitioners need to play a central role in the profession's knowledge-building and research life. This point has been emphasized by articles about the serious gap between social work practitioners and researchers (Butler, Davis, & Kukkonen, 1979; Fanshel, 1980; Gingerich, 1979; Jayaratne & Levy, 1979; Rosenblatt & Waldfogel, 1983). The literature suggests that this gap in part rests on the assumption of a dichotomy between the humanistic concerns of practitioners and researchers' attitudes about scientific rigor--the notion that these two are somehow antithetical to each other. In reality though, humanistic concerns are best served by a spirit of scientific inquiry that promotes the search for knowledge, adequately explains and predicts social work phenomena, and enables the social worker to practice more effectively and efficiently.

The literature also suggests that this gap stems from the poor fit between social work practice and explanatory theories borrowed from various social and behavioral science disciplines. Although scientific research based on these theories has helped clarify situations, it has lost its influence on the social work profession by not providing direction for interventive activities. To some extent, this poor fit has become a disincentive for social work practitioners to conduct research or use the professional literature to enhance their practice. For such direction, social workers have relied on "practice-wisdom" or "experience"; that is, on the case tradition of social work practice which has been handed down by word of mouth from generation to generation but has not been clearly articulated or systematically examined.

Over the years, William Gordon (1964; 1983) and Harriet Bartlett (1970) have raised an old but fruitful idea for formulating research problems of significance to social workers. Their idea is that social workers, knowledgeable in both practice and research, should mine the wealth of knowledge stored individually as practice wisdom and then articulate a theory for social work practice. Such articulation requires making explicit what it is social workers do, how it is done, why it is done, the way it is done, and under what conditions the practice is effective. From these explicit statements, the social work practitioner-researcher may then form practice propositions which can be empirically tested and which, in turn, may lead to other practice propositions and models.

It is important that school social workers engage in such inductive research efforts. When researchers from other disciplines or professions come in to do school social work research, the odds are that their research will often be developed within their own conceptual frameworks and value systems and not those of social work. Therefore when school social workers do not engage in the formulation of their own research, they are forfeiting their professional responsibility for the development of empirically grounded theoretical frameworks to guide their practice. Similarly, it is critical that school social workers also address the needs and nuances of their own specialized areas of practice.

## Formulating a Research Problem

Although a difficult task, there is nothing mystical or technical about the process of formulating a school social work problem for research. It is simply the process of working with thoughts, mental images, and abstractions about practice and then pulling them together into a systematic and coherent whole. It involves developing a sort of cognitive map about what school social workers understand to be the realities of daily practice and what can be used to guide their practice activity toward achievement of the desired results. Even the most grand theory can be viewed as nothing more than a body of abstractions which are interrelated and which enable the thinker to explain and predict something about phenomena. The problem, however, is making sure that the selected theoretical orientation does not overlook the actual experiences of those being studied.

For school social work practitioner-researchers, the experience of formulating a research problem is often uncomfortable, awkward, and upsetting. They believe they know something profound about their practice. Yet when they try to verbalize this practice knowledge, it often sounds fragmentary, incomplete, and perhaps even insignificant. Therefore, the following simple common sense guides may be helpful in this stage of a research effort.

First, the practitioner cultivates the habit of raising questions about what is going on in his or her practice relevant to the area of concern. S/he looks for similarities and regularities, as well as differences from one case to the next, and tries to state these observations as a proposition or hypothesis regarding the practice experience. The practitioner then observes whether other similar situations in practice can be explained by this proposition and whether the outcome of an interventive act can be successfully predicted.

Next, the practitioner reflects on this embryonic proposition and considers what theoretical framework may be compatible with this view of what is taking place in practice. S/he reflects on these ideas in the light of information about cultural pluralism and school social work practice in order to assess their sensitivity and credibility as explanatory concepts. In order to hold onto this insight, the practitioner puts it into writing. S/he then shares this thinking and proposition with colleagues and "worries over it." With this step, the practitioner has embarked on a line of inquiry and has become a researcher. Although exciting, this period of beginning inquiry is also vulnerable because it is simultaneously uncertain and awkward. At this stage of problem formulation, it becomes tempting and all too easy to accept someone else's thinking or conceptual view in explaining away the research question. Yet by so doing, practitioners fail to test for themselves the adequacy of their own practice propositions in explaining social work practice phenomena and in predicting outcome.

Other threats to the beginning line of inquiry are the practitioner's own feelings of inadequacy about doing research and fears that the scope and nature of the research task are beyond his or her capability. Such concern is premature before the question for study has been clearly articulated. The practitioner must: (1) put into writing the reasons for wanting to research the proposition; (2) state the proposition as a hypothesis--that is, put it into an empirically observable or testable form; (3) define the key terms or variables both conceptually and operationally; and (4) state the question's significance in terms of the practitioner's own practice as well as that of others. While an arduous task and one that requires discipline, this written effort is critical in articulating the problem for study.

## Designing Research

At this point, the practitioner begins to think about testing the practice proposition and turns to research design as the means for obtaining valid and reliable data about the specific research problem. Put simply, research design forces school social workers to observe and measure clearly specified practice phenomena by focusing on the relationships among selected intervention strategies and processes as well as worker/client characteristics and behaviors. Decisions about research design depend on the nature of the service setting, the practice problem to be addressed, the target population, the proposed intervention strategies, and the purpose of the particular research study. Possible quantitative and qualitative research methodology alternatives available and appropriate for the problem are also taken into consideration. Decisions about the choice and adequacy of a research method embody a variety of assumptions regarding the nature of knowledge, the methods through which that knowledge can be obtained, and the phenomenon to be investigated.

A major difficulty in social work research has been that the favored quantitative social and behavioral science research methods have focused on providing rigorous empirical aggregate data and have excluded efforts to capture the complexity and integrity of the individualized phenomena inherent in professional practice. By contrast, the often overlooked qualitative research methods of anthropology, the humanities, and hermeneutic phenomenology (Ricoeur, 1981) provide an opportunity to explore the substantive meaning and experiential context of individual observations while retaining the ideals of sound reasoning and empirical grounding of theory.

Since each provides a different perspective of the reality of school social work practice, exclusivity need not be a problem in research design. In some instances, qualitative research can be used to assist quantitative research by providing a theoretical framework, validating aggregate survey data, providing an empirical basis for constructing measurement indices, and offering case study illustrations. Conversely, aggregate quantitative data can be used to depict prototype cases with which to identify representative and non-representative individuals for qualitative study of the contextual meaning of aggregate patterns (Fielding & Fielding, 1986).

The sheer number of research designs and the variety of ways that research may be classified often prove confusing and overwhelming for practitioner-researchers (Bloom, 1979; Campbell & Stanley, 1966; Jayaratne & Levy, 1979; Kerlinger, 1986; Tripodi & Epstein, 1980). Therefore, the following overview is offered as one way of grouping available research designs and portraying design options. For as practitioner-researchers become more aware of the many research designs available for obtaining the level of knowledge desired, their final selection is increasingly likely to achieve the ideal combination between problem, purpose, and method which will produce valid and reliable data about the specific research question under consideration.

## Quantitative Research Designs

The construction of both individual and group quantitative research designs includes four phases: (1) selecting the research design and sampling plan which best fit the problem under consideration; (2) collecting the data; (3) analyzing the data; and (4) interpreting the findings in the light of theory and practice.

### Individual Research Designs

Individual research designs are exploratory quantitative designs and result in tentative findings about a particular problem area or the impact of a specific social work intervention with a single client. Often called problem-solving (Loevinger, 1976) or model-building (Reid, 1979) designs, they highlight the concept of uniqueness. Problem-solving designs are useful in evaluating individual outcomes of practice and in providing feedback to clients, practitioners, and funding sources. It is only through replication, however, that these designs develop information applicable to a broader range of problems and client systems. There are two major types of problem-solving designs: single subject designs and case comparison designs.

Single Subject Designs. Psychosocial assessments of individuals within the context of significant social institutions (families, neighborhoods, schools) usually include practice information about how a person is functioning, why a person is functioning as s/he is, what is perpetuating the particular pattern of psychosocial dysfunction, and how this pattern may be changed. Single subject research designs provide a means for demonstrating that the school social work intervention strategy selected through psychosocial assessment does indeed provide experimental control over the psychosocial functioning pattern targeted for change (Gingerich, 1979; Gottman & Leiblum, 1974; Tripodi & Epstein, 1980). The focus of study may also be the collaborative intervention of the entire educational team. In other words, single-subject designs attempt to show which intervention strategies or treatment methods are responsible for the occurrence or non-occurrence of social functioning and learning behaviors targeted for change. Single-subject designs are thus simply clinical experiments limited to one client in order to determine the causal relationship between the intervention strategy (independent variable) and the outcome or change in social functioning (dependent variable) (Bloom, 1979).

In single-subject research, social workers measure a selected aspect(s) of psychosocial functioning before and after the intervention strategy. Each client is set up to serve as his or her own experimental control for assessing any changes which may or may not have occurred. Such within-subject designs seek to assess the effects of an intervention by repeatedly observing and recording changes in the client's functioning over a period of time. According to Thomas (1978), these designs seek the answers to four questions: (1) What is the psychosocial functioning behavior to be altered? (2) What are the factors which control that behavior? (3) What is the best technique to alter that behavior? (4) How successful was the technique that was used?

There are several major variations of single subject designs but all have in common the following: a baseline or pretest measurement of the target objective or psychosocial functioning problem, a period of intervention, and a post-test measurement or follow-up after the intervention (Jayaratne & Levy, 1979). These simplistic designs have nearly universal applicability in social work intervention. They enable both the client and school social worker to compare what happens to the identified target problem(s) before and after the intervention. When one of these designs is replicated over time with a series of clients with similar problems in psychosocial functioning, the data may be aggregated (Corcoran, 1985). As grouped data, the findings become more generalized. These designs remain problematic, however, in that they do not allow for a discriminative analysis of the variant effectiveness of differing intervention strategies when multimodal treatments are employed (Coulton & Solomon, 1977; Gambrill & Barth, 1980). It is also important to note that marked controversy surrounds single subject research. (For more detailed discussions of these designs, see Bloom, 1979; Gambrill & Barth, 1980; Jayaratne & Levy, 1979).

One variant, component analysis design, does involve either the analysis of multiple intervention strategies within a given treatment package or the comparative analysis of several treatment programs with a client. The clinical weakness of component analysis is that it requires two or more clearly distinct client interventions or treatment programs (Browning & Stover, 1971; Herson & Barlow, 1976). These designs are especially helpful in that they encourage the practitioner to take theoretical and practice wisdom concepts and operationalize them into meaningful illustrative behavioral patterns and relationship processes for systematic study.

### Group Research Designs

Group designs at the causal end of the continuum are termed puzzle-solving (Kuhn, 1962) in that they seek to discover missing pieces of social work practice in a manner usually considered more scientifically rigorous than the manner inherent in exploratory individual designs. Through use of representative samples in comparative statistical studies, these designs provide information which is assumed to be more generalizable to other problems and clients as a result of the population membership of the sample. Thus, they offer opportunity for inferring stronger associations between cause and effect. Considered the ideal for knowledge development in the physical sciences, these quantitative designs are often held up as the ideal for the social work professions as well. The major research designs in this category include: historical, longitudinal, correlational, and experimental designs. Again, each elicits different types of information, has different strengths and weaknesses, and is useful for different purposes with different practice problems.

Historical Research Designs. As quantitative designs, historical research designs assume the uniformity of behavior across time and place and seek to verify this uniformity. They depend on data derived from the client's past and observed by persons other than the practitioner-researcher. The research goals here are to reconstruct the past in a systematic and objective manner "by collecting, evaluating, verifying, and synthesizing evidence to establish facts and reach defensible conclusions" (Isaac & Michael, 1971). This increased understanding of selected past events is sought after in terms of their influences on the present. In clinical social work practice, quantitative historical research refers to an exhaustive systematic approach to seeking out relevant information about an identified problem as related to the early life experiences of a group of clients. Usually referred to by school social work practitioners as the social case history, the data collection methodology for these designs depends on both primary sources of data (where the client was a direct participant-observer of the reported event) and secondary sources (where the client reports the observation of others or where other persons report about the client). It is both the systematic collection, recording, and professional evaluation of this historical data that determine the rigor of social case history or historical research designs (Green & Wright, 1979; Leashore & Cates, 1985; Timberlake, Sabatino, & Hooper, 1979). (For example: Are the data authentic, accurate, relevant? What are the motives, biases, and limitations of the reporter?) Historical designs and their data collection methodology may be qualitative as well as quantitative.

Longitudinal Research Designs. Beginning with the present, these research designs investigate patterns of growth or change in clients over a period of time. They are concerned with patterns, rates, directions, and sequences of change in clients and with the interrelated factors that influence these characteristics (Smith, 1980). These designs have three basic variations: growth, cross-sectional, and trend. Longitudinal growth designs directly measure the change patterns in a sample of the same clients at different stages of development. The sampling in these designs is complicated by the limited number of clients who can be followed over a long period and by the attrition rate of the clients under study. Cross-sectional designs indirectly measure change patterns in clients by sampling different batches of clients from representative age levels. Trend designs establish patterns of change in order to predict future patterns or conditions of concern to the social work practitioner-researcher. By the very nature of their practice setting, school social workers have a unique opportunity to conduct longitudinal research.

Correlational Research Designs. These designs permit the school social work practitioner-researcher to approach a clinical problem in its natural environment, intervene with a planned strategy, and measure any changes which may or may not have occurred. In other words, correlational research designs are used to investigate the extent to which changes in one or more items of psychosocial functioning (behaviors or characteristics of concern) or variables are systematically associated with changes in one or more additional variables (desired outcome). These designs also permit exploration of selected school social work phenomena or problems in a systematic effort to learn more about their dimensions and magnitude as a prelude to planning and testing intervention strategies. Correlational designs thus permit the simultaneous measurement of several variables and their interrelationships. Although correlational designs do not identify cause and effect relationships, they do indicate or predict which variables are associated with each other in statistically significant and conceptually meaningful ways (Fischer, 1973; Kerlinger, 1986; Rosenblatt, 1968).

Experimental Control Group Designs. These designs enable the practitioner-researcher to investigate possible cause and effect relationships by administering one or more intervention strategies to one or more experimental groups of clients and comparing the results with one or more control groups not administered the intervention. In other words, experimental control group designs use an external control group (rather than the clients receiving treatment) as the baseline against which to compare changes in the group(s) of clients receiving the treatment intervention or experiment. By means of statistical analysis (single and multifactor analysis of variance, analysis of covariance, t-tests, and non-parametric statistics such as chi square), experimental control group designs permit several client intervention strategies to be varied concurrently across more than one experimental group. These designs also permit the simultaneous determination of the main effects of the intervention strategy (independent variable) on clients, the variation associated with the classificatory or outcome variable (dependent variable) and the interactive effects of the variables. This approach is problematic, however, in that the most rigorous research design is also the most restrictive and artificially apart from real life client situations (Campbell & Stanley, 1966; Glass, Wilson, & Gottman, 1975; Waskow & Perloff, 1975). Yet in circumstances where the impact of the intervention is not known, schools form self-contained, real life laboratories for comparing the effects of social work intervention with the effects of no intervention (Sabatino, 1985/1986) or for comparing the differential effects of two practice models. Schools also provide opportunity for the use of the most sophisticated designs (Solomon four group designs which provide controls for the effects of intervention and of pretesting on client growth).

### Qualitative Research Designs

Today's social work records and school social work's individualized educational plans are a far cry from earlier substantive records of problems, history, diagnosis, and treatment. In the past, the profession emphasized the collection of qualitative, individualized information as part of the assessment of a problem of psychosocial functioning and the outcome of social work treatment. The information was then placed in client case records and archives. It was also reported in narrative analytic form in the literature where it contributed to an understanding of the uniqueness and variability in the single case at hand and to possible ways of organizing and thinking about other cases. Such an individualized case study approach is still considered by many to be the most effective method for describing the experience of a single person in the context of his or her life situation and for developing explanations about the totality of that experience. Yet by itself, this fine-grained qualitative approach to knowledge development is clearly not enough.

Building on social work's rich case study tradition, the qualitative research methodology under consideration here strives for increased reliability and validity. It is defined as a set of methodological approaches to a research problem that: (1) are anchored in a holistic philosophical view of the world; (2) focus on studying events and emergent processes in their situational context; and (3) include the interplay of ideas about the context, process, and content of patterns and idiosyncracies in the problem as well as ideas about continuity and change. This methodology also incorporates a theoretical frame of reference for planning and structuring the research study. By indicating what phenomena deserve particular attention, less attention, or no attention, this framework serves an orienting function for the practitioner-researcher and screens out less relevant phenomena.

Qualitative research designs preserve the context and substantive meanings of the research problem as these meanings are identified through systematic observation of selected practice phenomena. The four stages of these designs roughly correspond with the stages of quantitative research: (1) invention--the stage of preparation or research design which leads to a plan for action; (2) discovery--the stage of observation and measurement for data collection to produce information; (3) interpretation--the stage of evaluation or analysis that produces understanding of the phenomena under consideration; and (4) explanation--the phase of communicating the results which produces a message for the selected audience of school social work practitioners (Kirk & Miller, 1986; Van Maanen, 1983). Although the following designs have distinct characteristics and nuances, they share an emphasis on understanding what has already occurred in practice in order to make sense and coherence out of current and future practice experiences.

Case Comparison Designs. These research designs involve the systematic comparison of a new practice case with old practice cases in which the dynamics, treatment methodology and process, and outcomes of intervention are clearly specified. Adapted from the legal profession, the case-comparison process consists of four steps: "(1) inquiry into pre-existing formulations of practice, (2) testing of practice formulations through comparative case observation, (3) application of practice formulations taken from reference cases, and (4) summary of contributions to practice knowledge buttressed by published reference cases" (Butler, Davis, & Kukkonen, 1979, 4-5).

The similarities and differences obtained as a result of this systematic comparison of current and prior interventions generate hypotheses as to what is relevant for the new social work intervention case. In other words, development of intervention strategies in the new case is dependent upon what the school social worker has learned from systematic observation of past cases as well as from the professional literature (theoretical, clinical, empirical). In addition to capturing the complexity of school social work practice with clients, these designs have the added advantage of allowing the practitioner-researcher to address the unanticipated aspects of clinical practice. These designs, in other words, recognize the uniqueness and intuitiveness of each practice situation, while they identify generic or predictable aspects of social work intervention. As a result, they provide a means for furthering the development of practice wisdom in a systematic manner. Although discussed here as qualitative research, case comparison designs may also take a more quantitative approach.

Naturalistic Field Studies. In naturalistic field studies, observation is the primary approach to studying person-situation interactions in their naturally occurring contexts. The practitioner-researcher decides on a problem area of focal interest, locates and enters the chosen study site, establishes relationships with key person at this site, and seeks a middle course between involvement and distance. The mutual interactive nature of field inquiry involves participating in the interpersonal process and sequential events at the field site over a period of time; that is, observing people in their own territory, interacting with them in their own language and on their own terms, and seeking to understand the meaning of the problem as embedded in their experience. In school social work practice, a field site may be a school, a classroom, a playground, a neighborhood, or a child's home.

Field techniques are used in the context of describing, explaining, or seeking to predict relationships between the key variables identified. Since they represent the context for the situations and activities which reveal the site phenomena of interest, the time, space, people, and events of the field are selectively sampled. The explicit sampling plan includes observation of the routine, the unexpected, and the special. Systematic recording procedures are designed to convert these sampled experiences to substantive data which will validate a new understanding of the phenomena under study. Analytic strategy involves analyzing the data as it is being collected in order to adjust observational approaches as well as to check and test the objectivity of the emergent ideas through additional data. This analytic approach considers the flow of action and meaning, feeling and belief, expectation and response which occur in the interaction cycles of statement and reply, and of nonverbal behavior and response. After bringing the collected substantive data to bear on the research question, the researcher begins to link understanding of the phenomena not only to the orienting theoretical framework but also to alternative theoretical concepts newly discovered during the field observation.

Text Analysis. In the analysis of texts or other available materials, the researcher explores the nature of the data and the subjects at hand with the goal of understanding the total situation depicted. In order to clarify and establish the context, structure and process of the research problem under study, s/he systematically observes and samples elements of time, space, people, and events within a clearly delineated framework. Since description alone is not enough, the researcher develops and refines generalizable theoretical concepts and frames of reference and then relates observed variability in the context to an observed constant in the process or outcome. When such comparisons of textual materials are attempted, the prime analytical technique is to show how variability in context influences the shape, pace, and direction of the psychosocial process under investigation. The extent to which descriptive chronology of the process is interpreted by theoretical themes or is used to derive theoretical concepts and ideas represents an attempt at generalizability--at placing the data within a wider conceptual scheme of things in a situation where a limited number of cases clearly restricts the external validity of the research.

Analytic hermeneutics and content analysis provide two alternative means of data collection for carrying out this design. Rooted in linguistics, hermeneutical analysis seeks to construct meaning through logical mapping of a semantic process already in place in text form and the context in which this semantic process originally occurred. Content analysis is a technique for sytematically describing the manifest content of communication characteristics and processes. Both data collection and analytic techniques are context sensitive and deal with elusive content as a reflection of deeper phenomena. They are designed to make replicable and valid inferences from recorded interactional data to the context of this data (Smith, 1982).

## Measurement and Observation

### Measurement

Possession of a wide repertoire of research designs enables the school social work practitioner to look at the level of knowledge desired and the corresponding evidence needed to produce that knowledge in order to select a design which will produce the desired results. However, many well designed studies yield disappointing results due to problems of measurement. Therefore, it is crucial that practitioners engaged in evaluating their practice and building social work knowledge develop valid and reliable measures of outcome (Corcoran & Fischer, 1987; Timberlake, 1979). In this critical research task, it is often helpful to work collaboratively with a research consultant or colleague.

Theoretically, measurement of anything is possible. But measurements can be meaningless if the procedures or rules for assigning numbers or quantifiers to objects or events in school social work do not approximate reality. For example, the measurement procedures may miss important apects of client behavior or personal well-being which are affected by the social work intervention. Or, the measures may not accurately reflect the goals or desired results of the problems or interventions being evaluated. Theoretical assumptions about human behavior and change, or about the causes of social problems and strategies for reduction, are inherent in these measures and measurement procedures. Problems occur when the practice assumptions differ from those in the chosen measures.

Another danger in quantitative measurement of psychosocial functioning is that adjectives which modify nouns often become reified or changed into nouns. For example, specific aggressive behaviors demonstrated by child clients in classroom situations may be termed aggressiveness. Changing aggressive behaviors to aggressiveness assumes a unitary dimension of which an individual child has a certain amount whatever the situation. The specificity of the type of behaviors (aggressive) and situations (classroom) has been dropped. To avoid this hazard of measurement, the practitioner simply keeps the adjective as an adjective and describes the situation in which the behavior occurs.

### Observation

Observation in qualitative research involves focusing on (or looking for similarities and differences in) the traditions of the research subject's world. In a sense, the researcher takes an interpretive stance and seeks to mediate two different worlds--that of subject and that of researcher--through a frame of meaning coherent to both. For example, in observing the social reality of the subject's world, the researcher draws on theory in deciding what to use as the unit of analysis for this comparative frame of reference. In using a qualitative research approach, the school social work practitioner-researcher seeks observable patterns in practice phenomena that make sense in relation to a specified theoretical framework.

## Assessing Validity and Reliability

Although objectivity is the basis for all good quantitative and qualitative research, its actuality may be called into question for a variety of reasons. For example, the credibility of the research may be called into question when its theoretical orientation does not take the actual experiences of the subjects into account. Similarly, a lack of cultural understanding and sensitivity to diversity may result in imposing dominant cultural norms on the data collected. In these instances, the research may provide an invalid answer to the question asked. To improve the objectivity of a study, the researcher seeks to increase the technical properties of reliability and validity.

The reliability of research is the extent to which a finding is independent of accidental circumstances and yields the same answer upon repetition. Specifically, reliability issues focus the practitioner-researcher on three properties: (1) stability of measurement--Will I get the same results by repeating the measurement?; (2) accuracy of measurement--Are the measures obtained from the instrument the true measures of the property being measured?; and (3) error of measurement--How much error or chance fluctuation is there in the measuring instrument? In qualitative research, reliability depends on explicitly described observational procedures which address these same three properties.

Validity is concerned with the extent to which the research provides a valid answer to the question asked--Are we measuring what we think we are measuring? Is the finding interpreted in a correct way? From these questions, it is clear that the issue of validity is a fundamental problem of theory. Validity issues also focus the researcher on three properties: (1) content validity--Are the items of the measuring instrument substantively tapping into and also representative of the property the researcher is seeking to measure?; (2) criterion-related validity--How does this measurement procedure compare with another established measure of this same property?; and (3) construct validity--Does this measurement procedure reflect the theoretical framework used in explaining this research problem? In qualitative research, validity issues address these properties but are primarily confirmatory methods of the data collection phase rather than the analytic phase.

## The Findings

Once the data have been collected and analyzed (again, a collaborative effort with a research consultant and colleagues may be helpful), the practitioner-researcher begins to sort out the usefulness of the findings for day-to-day practice. For many school social work practitioners, this phase is the most exciting. On the one hand, it represents the culmination of their best professional thinking. On the other, it is an opportunity for rethinking the problem, for establishing guidelines for practice in view of empirical data, and for beginning to think about unknown areas for further study.

When first confronting their findings, practitioner-researchers reflect on the interconnections or relationships identified among the independent and dependent variables in the study, then begin to make inferences about the implications for practice with the particular sample. In the process, they often ask--What do the relationships among these variables tell us about: the clients in this study? the school setting in which the study occurred? the processes occurring during the intervention? the outcome of the social work intervention? the technologies used in obtaining these results? future directions for social work practice and research? In this process of questioning and making inferences, the practitioner-researcher seeks to maintain a stance of cultural understanding and sensitivity to the subjects and setting of the study. Such questioning leads naturally to a restatement of the research findings in practice terminology--a transformation essential for their actual use in school social work practice.

### Adapting Research For Use

Practitioner-researchers are concerned not only with identifying the practice implications of their own research for school social work practice but also with adapting the research of others for use. This latter task is an all pervasive one and recurs throughout every phase of their social work careers.

In the various research and development models reported in the social work literature (Rothman, 1980; Rubin & Rosenblatt, 1979; Wodarski, 1981) and in research literature in general, an author identifies a problem along with a theoretical perspective and methodology for studying it, describes the conducted study, presents the findings, and offers propositions for using those findings. Although these propositions may be relevant for practice, they usually constitute only a first step for the social worker who seeks to make such knowledge his or her own for use in practice.

Specifically, the task of adapting published research for use in practice calls for the school social worker to immerse herself or himself not just in one study but in the literature of the selected area. This allows the school social worker to: (1) assemble and synthesize the published information relevant to the selected topic and target population; (2) determine the conceptual themes and theoretical bases; (3) assess the research methodology in relation to the explicit purpose of the studies and the strengths and limitations of the methodology used; (4) note what explicit directions the literature offers as guidance for practice; (5) assess the degree to which statements of fact are backed up by grounded empirical observation; (6) assess the logic of the argument; and (7) note what implications the published research could have drawn for practice.

It is important to note that the literature search of a given area for potential practice principles includes not only the practice-relevant social work research literature but also the literature of other professions and the literature of the social and behavioral sciences. In sum, research utilization by school social work practitioners involves selecting research results from a wide variety of sources and interpreting, synthesizing, drawing inferences, and applying these results toward a specific practice problem in a specific practice setting. In this way, the school social worker initiates the spiral anew.

A key for focusing and directing the literature search is the identification of the central criterion or dependent variable of interest for the particular practice problem addressed; specifically, the dependent variable(s) being used as the criterion variable by the author. Then, the practitioner-researcher determines which independent variables (the presumed causes) the author has used to account for the variability of that dependent variable. For example, drug use may be the current central interest or criterion variable of a school social worker's practice. Thus, the practitioner-researcher would assess the research literature in terms of how drug use is conceptually and operationally defined and in terms of the independent variables introduced to help account for variability in drug use by different persons in different situations.

Authors will differ in theoretical approaches. In relation to the drug use example, some authors approach this topic from a socio-cultural point of view. In this instance, the selection of independent variables and the interconnections among the variables are drawn from that perspective. Other authors view drug use from a physiological or from a psychoanalytic perspective with the consequence that the independent variables will be drawn from these perspectives. In analyzing the literature the practitioner's efforts are directed toward assembling, evaluating, and synthesizing the drug use research findings from these different approaches and translating them for practice purposes with a targeted clientele.

The next major step is the determination of how useful the research findings are for practice purposes. To accomplish this step, the school social worker reflects on how the author views the interconnections among the independent variables and the dependent variable(s) in terms of the interconnections seen in practice. As a research-oriented practitioner, one then looks for patterns of similarities and differences in his or her own practice in an effort to detect any regularities. Drawing on this practice view, the school social worker notes whether what the author reports in terms of interrelationships of variables is consistent with or differs from his or her own experiences. Given this stance of testing the research literature in terms of his or her own interest and its fit with his or her own experience, the practitioner-researcher has a base for defining very clearly what is wanted from the literature and for directing the literature search.

It is important to distinguish between a clear goal-oriented examination of the research work of others, the formulation of a comprehensive digest of all that everyone is saying, and the actual formulation of one's own theoretical framework. The distinction is between being well informed regarding a set of theories which one uses like a catalog, and forming and operating from one's own conceptual framework. It is this latter which comprises the school social worker's own model of practice.

The final point in using research findings for school social work practice is that of determining the adequacy of the research from a methodological point of view. This process tends to be intimidating for practitioners because what the practitioner sees in the literature is discussion about research design, statistics, instruments, validity, reliability, and a variety of terms with which the practitioner is uncomfortable and tends to avoid. However, the school social worker can develop a disciplined critical approach to the methodology by asking simple questions about the choices the researcher made about research design, statistical analysis and the like. Such questioning is critical for a researcher's choices affect the nature of the findings and subsequently the nature of practice. If the choices are not the most appropriate ones for a particular problem, then the findings may be neither reliable nor valid. In the initial approaches to assessing the adequacy of research methodology, school social workers may find it useful to consult with researchers.

There is value for the practitioner in struggling with the logic of the design and statistical plan in assessing the overall adequacy of the research. Even if the assessment is wrong, s/he has gone through the struggle and has learned from it, thereby becoming more competent in assessing the adequacy of other research. It is important for the school social work practitioner to engage in this learning process and assess research findings that guide practice so that s/he will have some degree of confidence in the findings and their applicability. In addition, the more the school social work practitioner understands research processes carried out by others, the more knowledge s/he has available to carry out practice-related research.

## Summary

This chapter has presented an overview of research and the school social work practitioner within the context of the internal and external pressures on the social work profession. Although the development of knowledge for practice and the evaluation of services are both presented as central functions of research, the emphasis is on the key role of research in the development of knowledge for future school social work practice. Social work practitioners in educational institutions are perceived as the central figures in this development. Therefore, their role must be explored and guides offered for formulating research problems, designing research, measuring the variables of interest, and using the findings of their own research. Since developing knowledge for school social work practice also involves assessing and adapting the research of others for day-to-day work, suggestions have been offered for this task as well.

## ABOUT THE AUTHORS

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# Defining Empirically Based Practice

**Deborah H. Siegel**

*A conceptual and operational definition of "empirically based practice" is needed before the integration of research and practice can become a reality. This article describes a study of how research and practice were integrated in the graduate social work program at the School of Social Service Administration, University of Chicago. The author develops a definition of empirically based practice.*

MUCH HAS BEEN written expounding the virtues of integrating research into the practice of social work.[1] Practitioners are exhorted to read research articles, make use of research findings, and evaluate their work using research methods.[2] Yet, there is little evidence that these activities are occurring in the mainstream of clinical practice.[3] The reasons for this are many and include the traditional lack of rapport between researchers and practitioners and problems with the methods used in schools of social work to teach research in ways that clearly show its usefulness in practice.[4]

Furthermore, the need to evaluate the effectiveness of clinical practice is an increasingly frequent theme as agencies scramble for limited funds. Reaganomics has helped bury the once-fashionable belief that social ills can be cured by tax dollars. More than ever, social workers are required to justify the services they deliver.

In addition to the economic reasons for the profession's need to integrate research and practice, social workers also have an ethical obligation to develop empirical foundations for their interventions. Practitioners have little right to intervene in clients' lives on the basis of mere faith that good is being done—they have a moral obligation to monitor and to test empirically the effects of their interventions. Too often, the good intentions of the social worker do not end in positive results for the client.[5] Workers' intuitive assessments of outcomes, therefore, must be augmented with empirical data so that the results of the efforts to help are measured as carefully as possible.

As a result of social workers' increasing awareness of the need to incorporate research into practice, the profession is now grappling with the task of determining how that can be done. What is empirically based practice? What distinguishes it from traditional social work practice? What points of view and behaviors characterize the worker who engages in it? The purpose of this article, therefore, is to define empirically based practice conceptually and operationally.

One approach to developing a definition is to examine how research and practice are integrated in social work education. Schools of social work play a central role in shaping practice, because educators determine the design and content of curricula and help socialize future practitioners into the profession. Understanding the nature of practice as it is taught in schools of social work is an important step toward understanding actual practice in agencies. Hence, defining social work educators' views of empirically based practice is an important task.

## BACKGROUND

In the late 1970s, awareness was widespread among social work educators of their responsibility to give future practitioners an understanding of the importance and methods of integrating research and practice. Consistent with this trend, in 1978 the School of Social Service Administration at the University of Chicago implemented a new graduate curriculum that had as one of its major goals the integration of research with practice methods and field instruction during the first year of study. This curriculum innovation represented one of a few major efforts nationally to emphasize empirically based practice in a school of social work and to evaluate the effects of the endeavor systematically.[6] This article reports on those portions of the evaluation that yielded data about the various ways in which empirically based practice was defined, taught, and implemented.

### Design of the Curriculum

In fall 1979, 148 entering first-year master's degree students in the School of Social Service Administration, University of Chicago, were randomly assigned to seven sections of the curriculum. Each section was taught by a research instructor and a practice instructor who were paired together to coordinate their courses. Assigning the pair of instructors to a group of students was intended to increase the ongoing communication between the research and practice faculty throughout the academic year so that the educators could, when appropriate, hold joint classes, give joint assignments, coordinate the sequencing of topics in each course, refer to each other's courses in lectures and discussions, and engage in other innovative procedures designed to integrate the

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teaching on research and practice. The research course was two academic quarters in length; the practice class extended through all three quarters of the first graduate year. The students in each section were also assigned to a small number of field instruction sites so that the research and practice instructors could be familiar with the placements and relate the course work to the field experiences. Students were required to carry out a research project in their field agencies. The projects, supervised by the research instructors, were to relate directly to the students' work in their agencies or to real needs identified by agency personnel and took three quarters to complete.

### Instrumentation and Data Collection

At the end of the winter quarter in 1980, the 14 faculty members and six doctoral teaching assistants who taught in the new curriculum were individually interviewed to gather information about how they conceptualized and implemented the integration of research and practice in their courses. These tape-recorded interviews lasted from 1½ to 2½ hours. A "Focused Interview Guide" was used so that similar kinds of information about each course would be discussed, including: goals; themes and emphases; content; the rationale underlying the presentation of material; the nature of assignments, examinations, and research projects; and efforts made to integrate the research course with the practice course and fieldwork. During the interview, instructors also completed an "Integration Activities Checklist" to indicate which integration activities they had used during the previous year. Possible activities included: (1) assignments in which students wrote critiques of research studies to determine the practice implications of the findings; (2) overlap in readings and assignments in the practice and research courses; (3) joint meetings of a section's research, practice, and field instructors to discuss integration; and (4) integration of themes in the practice and research course. (Examples of the integration of themes included how problem solving applies to both research and practice, how research concepts can be applied in practice, how to use research findings in practice, how to deal with obstacles to using or doing research in agencies, and how to apply the logical rigor of research to one's thinking about practice.) The Integration Activities Checklist was administered orally at the end of each interview to elicit relevant information that had not been already covered.

During the spring quarter of 1980, each research instructor also completed a self-administered questionnaire about her or his research course. This questionnaire consisted of several parts:

1. Instructors indicated from a list of items about research and statistical knowledge which ones had been discussed in class (for example, definitions of Type I and Type II errors, ratio scales, one-tailed tests, unobtrusive measures, cross-sectional studies, sampling, exploratory studies, and reliability).[7]
2. Faculty indicated how much emphasis they placed on various research objectives (for example, teaching students skills for contributing to the development of knowledge, for developing and assessing intervention procedures and programs, for developing an empirical orientation to practice, for evaluating specific practice activities in specific situations, for developing an inquiring, skeptical attitude toward practice, and for critically assessing research reports).
3. Each instructor indicated the extent to which class discussions were devoted to various research topics (for example, group designs, single-subject designs, specification and measurement of outcomes, program evaluation, causality, building of intervention models, needs assessment, effect of factors other than the practitioner's action, assessment of change, and problems of sampling).
4. The instructors indicated the extent to which the course had addressed various research themes (for example, research as an important tool of practice, practical uses of research methods in practice, how research concepts can be applied in practice, how research can be made an integral part of intervention, how to deal with obstacles to using or doing research in agencies, and how to understand research reports).[8]

Each faculty member's course materials were also collected and examined as part of the effort to describe each section and the various approaches to teaching empirically based practice. These materials included course outlines and syllabi, lists of assigned readings, bibliographies, written assignments, and examinations.

Information about the research instructors' views of how research and practice are integrated was also gathered from the students. During the last quarter of their first year in the master's program, the 123 students who were still part of the study completed a questionnaire that, among other things, asked for their perceptions of the empirically based practice themes in the research course.[9] Students were asked to respond on a six-point Likert scale to questions about the extent to which the research course had stressed research as an important tool of practice, indicated practical uses of research methods in practice, indicated how research concepts can be applied in practice, and addressed how to read and understand research reports. Students also responded to questions about the extent to which fifteen specific content areas—including specification of problems, assessment of change, evaluation of specific practice activities in specific situations, quasi-experimental designs, and interviewing—had been addressed.

### Data Analysis

The information gathered from the taped interviews with the teaching personnel, course materials, Integration Activities Checklist, and questionnaires was analyzed and used to prepare a standardized description of each teaching section. Each course description was submitted to the respective instructors for feedback on accuracy. Data from the instructors' questionnaires were summarized in tables that depicted similarities and differences among sections. Several statistical analyses of the students' questionnaire responses were computed, including an analysis of variance and a posteriori contrasts to determine on which course characteristic variables there were statistically significant differences among sections and to identify the sources of those differences.[10]

## FINDINGS

The data from all sources were carefully examined to determine, by induction, how research and practice had been integrated in each teaching section. A typology of five views of how research and practice can be integrated in both social work education and practice emerged: (1) research activities can be a part of clinical interventions, (2) research findings can be used to shape interventions or construct personal practice models, (3) research and practice are both problem-solving processes, (4) research concepts can be useful as practice concepts, and (5) research and practice are both applied logic.

*Research activities can be a part of clinical interventions.* One of the most promising ways of integrating research and clinical practice is to incorporate research activities into social work practice. A common example of this is the worker's use of single-subject ($N = 1$) designs to test the effectiveness of interventions. A simple form is the reversal design, in which the client's targeted problem behavior is measured before an intervention begins, during the intervention, and after the treatment has been withdrawn to demonstrate the effect of the intervention. There are, in addition, many other ways of using research as a practice tool, as outlined in the following suggestions:

1. The worker can do content analyses of audiotapes of interviews to track changes in the client's verbalization or to correlate those changes with specific interventions. For instance, with an adolescent client who does not talk much during sessions, the worker can listen to tapes to see what circumstances within the session seem to elicit or inhibit statements from the client.

2. Content analyses of videotapes can yield useful assessment information or be used to study the effects of the social worker's or client's behaviors during the session. Viewing videotapes of family interviews can give the worker data that are otherwise easily missed on subtle, nonverbal interactions among family members.

3. Structured forms of recording can help the worker keep track of his or her own and the client's performance of tasks outside of sessions. This can increase accountability to clients and help clients observe their own behavior. The structured clinical record can help the worker to observe, conceptualize, structure, and record clinical phenomena and to identify, define operationally, and measure the client's problems, the goals of treatment, and the interventions. The practitioner can develop his or her own structured recording guide or use existing forms.[11]

4. Self-awareness can be augmented when the client is asked to keep a log of the problem behaviors or feelings, recording when and where the problems occur and what precedes and follows each occurrence. This also helps track the client's progress over time.

5. The use of questionnaires (for example, Hudson's "clinical measurement packages") can also enhance the client's self-awareness, lead to a more precise definition of the problem, and help monitor changes.[12] The worker can use existing instruments or can develop questionnaires germane to an individual client's needs. These questionnaires can help the worker and client study, for example, the client's self-esteem, general satisfaction with life, feelings about therapy, relationships with peers, and so on.

6. Agency records are a valuable, yet infrequently used, source of information about the effect of services delivered. These records can, for example, yield information about a client's presenting requests for help and the extent to which those requests are changed to fit more closely the services that the agency actually offers. The records can also be used to determine if there are sufficient cases of a certain type to merit forming a group for treatment.

7. Needs assessment—that is, an empirical survey of the need of a potential client group for a particular service—is obviously an important activity. Data confirming needs are vital in seeking funding for programs and can guide the design of the program. An assessment may also show the practitioner that, although a new program may have intuitive appeal to planners, there is little expressed need for it among the target population.

8. Exploratory studies or surveys have many uses. For example, follow-up studies can yield information about a client's need for aftercare services (for example, for services after psychiatric or medical treatment of inpatients). A hospital social worker might conduct a survey of physicians' and allied health professionals' perceptions of medical social services and then use this information for staff development.

> " More than ever, social workers are required to justify the services they deliver. "

*Research findings can be used to shape interventions or construct personal practice models.* The findings of research studies form a rich body of information that can be useful to practitioners in designing treatment plans. For instance, considerable data exist demonstrating that altering the attention paid to children can be used to help them behave.[13] Studies indicate that planned short-term treatments frequently can be as effective as long-term open-ended therapies.[14] Some research shows that social work interventions can have unintended consequences.[15] Certainly, awareness of information acquired through research is important in enabling the practitioner to develop empirically based and well-reasoned interventions.

Mullen, for example, has developed guidelines to assist practitioners in using information from various sources, including practice wisdom, personal experience, theory, and research in developing a personal practice model.[16] Such a model explicates a conceptual scheme that specifies and gives orderly direction to a worker's view of practice. Because the model is explicit, it can provide a basis for planning interventions and evaluating practice. Mullen, in adapting the six-stage framework for the utilization of information conceived by Rothman,[17] has developed "a working conceptualization of what seems to be the flow of activity in personal model development."[18] This process begins with locating information, developing summary generalizations of that information, using those generalizations to develop guidelines for intervention and evaluation, field-testing those guidelines, and refining the summary generalizations and practice guidelines.[19] The process can thus be helpful to the practitioner who wants to use research findings to shape interventions.[20]

*Research and practice are both problem-solving processes.* Another way of viewing the relationship between research and practice is to stress that both are activities that reflect the traditional problem-solving paradigm.[21] Problem solving begins with the recognition that a difficulty exists and proceeds with the stages of problem specification, brainstorming alternative solutions, assessing the alternatives, collecting data, and selecting, implementing, and evaluating an alternative. Each step in problem solving can be traced in the processes of research and social work intervention. Clearly, the researcher's and the practitioner's activities are problem-solving efforts that are expressions of a generic problem-solving paradigm. As such, research is viewed as a problem-solving activity that every social worker can use in the practice of social intervention. Table 1 demonstrates the parallels among problem solving, research, and social work intervention.

*Research concepts can be useful as practice concepts.* One can also understand the inextricable relationship between research and practice by seeing that concepts from research can be used in the practice of social work intervention. For instance, researchers are trained to be concerned with sampling error. The researcher wants to select for study a sample of people who represent a particular population, for only then will findings be generalizable beyond the sample itself. Similarly, practitioners need representative samples of a client's problem behavior to have a complete understanding of the client's difficulty. Suppose, for instance, that a wife in marriage counseling charges that her husband is not an affectionate person. The worker must ascertain if this is true of the husband in his interactions with all family members, in all circumstances, or simply with the wife or in certain situations, for this is important information in defining the problem. Or consider the client in treatment who behaves compliantly in the worker's office but physically attacks family members at home. The worker needs knowledge of the client's behavior in different settings to have a complete understanding of the problem. A misdiagnosis of the problem, based on a faulty sample of the client's behavior, leads to misdirected interventions.

Table 1.
**Parallels among Problem Solving, Research, and Social Work Intervention**

| Problem Solving | Research | Social Work Intervention |
|---|---|---|
| Recognizing the difficulty | Problem identification and specification | Problem identification and specification |
| Specifying the problem | | Assessment |
| Suggesting possible solutions | Formulation of a hypothesis | Planning of treatment |
| Exploring suggestions rationally | Design construction | |
| Collecting data | Data collection | Data collection (throughout) |
| Selecting an alternative | | |
| Carrying out the alternative | Experimental manipulation | Intervention |
| Evaluating the outcome | Data analysis and interpretation | Evaluation and termination |

Researchers are concerned, too, with the operational definitions of the concepts they study. An operational definition specifies the concrete, observable, measurable indicators of an abstract concept. The researcher knows that without an operational definition of the concepts to be studied, precise measurement is not possible. Clinical social workers also need to define their terms operationally to avoid confusion, miscommunications, misrepresentations, and imprecise thinking. For example, a worker may write in a case record that the client engages in aggressive behavior. If the worker does not operationally define what "aggressive" means in this case, it is not clear whether the client has murdered someone, slaps the children, or simply curses when angered. Or, when a worker tells a referral source that the client has poor ego strength, the jargon in and of itself has little meaning unless accompanied by examples of the client's behavior that has led to the worker's use of this diagnostic term. The inclusion of the behavioral data is vital if practitioners are to avoid arbitrary and unfounded labeling of clients, miscommunications, and misunderstandings among human service professionals and the resulting misdiagnoses and useless or harmful interventions.

*Research and practice are both applied logic.* The canons of inductive and deductive logic must underlie research and practice if those activities are to be logically coherent, consistent, and free of fallacies. For example, logicians frequently caution against the "post hoc fallacy," which refers to a situation in which one attributes a causal connection between two phenomena that are in fact merely correlated. Legend has it, for example, that the caveman fell prey to this logical flaw in thinking when he made loud noises to scare away an eclipse. When the eclipse passed, the caveman thought that his intervention had succeeded.

Similarly, researchers are taught that certain conditions must be met for a causal relationship between A and B to be demonstrated: A must precede B in time, A and B must be correlated, and alternative plausible explanations for B (for example, effects of history, maturation, testing, and contemporaneous events) must be ruled out. The practitioner who thinks carefully about social work knows that simply because a child who is receiving play therapy begins to act out less often at school, it is not safe to assume that the improvement is due to the social work intervention. Other factors in the child's life may have changed while the child was in treatment with the social worker. Perhaps the teacher found a more effective method of behavior management, or a classmate who instigated the misbehavior was out sick for a week, or stresses at home that were exciting the child subsided. The worker who erroneously assumes that play therapy was effective with that child might be tempted to use the same ineffective intervention in other cases. What is basically superstitious behavior becomes cloaked in clinical jargon and passes as informed professional judgment. The parallel to the caveman is striking.

Examples of parallels in the logic of research and practice are numerous. For instance, both the researcher and practitioner must be aware of the "aggregative fallacy" and the "ecological fallacy."[22] The former is the incorrect assumption that the characteristics of an individual will be characteristics of the group from which that individual comes. The latter is the incorrect assumption that the characteristics of the group are true also of any individual in that group. For example, in forming a psychosocial assessment, it is an error for a clinician to assume that a given black client is poor simply because there is a high incidence of poverty among minorities. The researcher knows that a group's mean score does not necessarily predict the score of an individual from that group, and that the standard deviation should be reported with the mean in order to convey information about the way in which individual scores are dispersed around the mean.

## DISCUSSION

The findings of this study indicate that there are several ways of viewing and pursuing the integration of research and practice in social work. The social work literature also supports a multifaceted view of empirically based practice. Briar, for example, asserts that research can be incorporated routinely without altering the worker's mode of practice because research and practice are in some ways similar activities and reflect parallel methods of problem solving.[23] Others maintain that the treatment process can be viewed and taught as a method of gathering facts, assessment, and treatment that helps the worker to develop a capacity for critical analysis and evaluation of his or her own practice.[24] According to Boehm, research can be linked with the teaching of practice by helping the student to see that efforts to improve and build knowledge are similar to efforts at solving human problems.[25] Francel et al. state that "Research should be identified for the student as problem-solving and compared with the other problem-solving methods in social work." and Crane notes that research and practice both rely on a process of inquiry.[26] According to Kahn,

> In order to integrate scientific inquiry into both research and the other social work practice methods, the student must put to work in all of them a common epistemology, identical canons of objectivity and the same kind of logic connecting explanations and observations. He cannot have one set of ideas organizing his research inquiry and another, possibly conflicting, set of ideas organizing his inquiries in the other methods.[27]

## EMPIRICALLY BASED PRACTICE DEFINED

An overview and synthesis of the findings from the study show that empirically based practice can be conceptualized and operationalized in a variety of ways. Ideally, the social worker who engages in empirically based practice does the following:

1. makes maximum use of research findings,
2. collects data systematically to monitor the intervention,
3. demonstrates empirically whether or not interventions are effective,
4. specifies problems, interventions, and outcomes in terms that are concrete, observable, and measurable,
5. uses research ways of thinking and research methods in defining clients' problems, formulating questions for practice, collecting assessment data, evaluating the effectiveness of interventions, and using evidence,
6. views research and practice as part of the same problem-solving process, and
7. views research as a tool to be used in practice.

Clinicians and educators who appreciate the importance of making the practice of social work logically rigorous, accountable to clients, and persuasive to funding sources can look beyond the old disputes between the researcher and the practitioner and beyond traditional single-subject designs and controlled experimental studies. There is fertile new ground to sow in using research as a tool in problem solving, research concepts as a guide to clearheaded thinking, and research findings as a source of information for social work practice. As Wood has said, practitioner-researchers have both

> the requisite skills to analyze critically the differences among practice wisdom, doctrine and cultism, and practice theory; and the skills to enable them to take responsibility for development and empirical validation of the knowledge base for their own social work practice.[28]

Wood's aim, and that of this article, is to help social workers think "like researchers, while acting like compassionate helpers."[29]

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9. Attrition in the sample occurred when a student withdrew from school, did not complete both quarters of the research course, or switched sections. Only one student refused to participate in the study.

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21. The problem-solving paradigm was first postulated by John Dewey in *How We Think* (Boston: D.C. Heath & Co., 1933), a volume that described the thought processes of a human being faced with a problem. Dewey maintained that to eliminate a difficulty, a person must think according to a rational, orderly procedure. Adherence to this well-defined step-by-step sequence guards against uncritical and impulsive conclusions about the nature of the problem or the solutions to the difficulty. Although Dewey omitted evaluation as the final phase of the process, contemporary writers generally opt for its inclusion.

22. Dwight J. Ingle, *Is It Really So? A Guide to Clear Thinking* (Philadelphia: Westminster Press, 1976).

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# FUTURE RESEARCH IN SCHOOL SOCIAL WORK SERVICES: AN UPDATE*

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ABSTRACT: This chapter discusses the use of explanatory theories for school social work research germaine to the education profession and identifies six areas for future research: school as a mediating environment, utilization of services, value dilemmas, issues of consumerism and local accountability, legislatively mandated program changes, and clinical practice in schools.

Social workers are constantly confronted with pressures from inside and outside the profession to develop empirically-based practice methodologies. Internal pressures stem from the belief that the missing research component is necessary for the development of a professional theory base and maturation of the profession (Fanshel, 1980). External pressures for critical examination of the scientific nature of social work practice come from the current mandate for accountability of scarce public funds but grow out of the historical linkages between the profession and public funding of social work programs.

Despite these pressures, research has remained on a back burner in school social work practice. To date, budget, staffing, time, and energy for research have not been defined as priority items. However, a 1975 federal mandate for systematic but individualized service procedures for children and their families--the Education for All Handicapped Children Act--is providing external impetus for change. By underlining the need for a data base to document the effectiveness of services provided, P.L. 94-142 offers both positive and negative opportunities. On the positive side, this law provides added impetus for empirically demonstrated usefulness of school social work services as well as the need for additional services. On the negative side, P.L. 94-142 provides the opportunity for educational systems to phase out school social work services if school social workers continue practicing with only impressionistic data. It is clear that increased demand for educational support services for children with handicapping conditions and the scarcity of financial resources are likely to result in allocation of resources to those support services which not only demonstrate usefulness but can also document effectiveness and efficiency with hard facts.

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Given this federal law which directly affects social work practice in the schools, the profession's thrust toward documenting its theory and practice, and the new wave of collaboration between social work practitioners and researchers, school social workers must develop an empirically-based practice. Therefore, the following ideas are offered to stimulate school social work research.

## Establishing Priorities

Priorities for future research in school social work should be established on the basis of: (1) the potential of a study to have lasting relevance for school social work practitioners; (2) an explicit explanatory theory base appropriate to the research problem under consideration and to the school setting; (3) pragmatic circumstances associated with issues of resource allocation which may, at times, dictate the ordering of research projects; and (4) relevance to the social work profession. A word of caution is in order, however. High priority should be given to research studies that use theoretical frameworks and language meaningful to the core educational mission of schools and that clarify the differential impact of various social work interventions in relation to problems and target populations of concern to educators. For unless the problem is appropriately explained in the terminology of the host setting, the outcomes of school social work intervention cannot be assessed in terms of their usefulness, effectiveness, and efficiency for the core educational mission. Nor can they be used as ammunition in competing for scarce resources.

## Selecting and Developing Theory

As a first step in constructing theoretical frameworks which are meaningful in a school setting, social workers must learn to ask questions about the ordinary and the extraordinary and to develop hypotheses about what might happen if certain things occur. Theoretical and conceptual frameworks are basic for analyzing the selected research problem, identifying significant variables, interpreting the findings, integrating the findings into existing knowledge about school social work and the field of education, and providing a systematic means for replicating studies which further validates the findings.

In other words, as practitioner-researchers school social workers need to ask: Who? What? Why? When? Where? How? and, Under what circumstances do various practice phenomena occur? For example, they might ask: Who are the children being served? By whom? For what problems do the children and their families seek service? Why do the children have these problems? When do the problems occur? Where do they occur? How are they triggered? How do they impact on other children and educators? Under what interventive approaches do children with certain problems function better in school? Why are social work services offered in one way and not in another? What problems do school social workers encounter in delivering the service? Under what school circumstances do social workers perform best?

As school social workers ask these and other questions about their practice, many possible theoretical frameworks for exploring the research problems come to mind. Some questions suggest role theory focused on the effectiveness of school social workers in one or more of the multiple roles which they perform in a school system. Some suggest a psychosocial framework which is simultaneously focused on a pupil's internal psychodynamics and interpersonal relationships. Other questions suggest additional theoretical perspectives such as conflict, exchange, or social learning theories. However, the majority point to the utility of combining these theories with educational ones such as cognitive and developmental theories to form a multivariate explanatory framework employing the familiar language of the host setting.

Upon reflection it becomes clear that the theoretical perspective selected to explore a particular problem directs the researcher to different types of operational research questions, findings, and implications for practice. Consider the following two theoretical frameworks in analyzing and synthesizing empirical information about effective school social work practice.

## Role Effectiveness of the School Social Worker

First, consider the multiple roles performed by social workers in the schools. The concept of multiple role performance focuses attention on the relationship between the integration of the social worker into the school system and the design of school social work practice. As an occupant of a social work career position within an educational setting, a school social worker must cope with and be accountable to two professional systems--social work and education. His or her professional identity and career are linked with both.

A school social worker usually finds that the position incorporates the concomitant roles of pupil service worker, pupil service teammate, consultant to teacher and principal, and direct service provider to children and their families, among others. Each of these roles carries role-specific ways of thinking about, feeling about, and acting in practice situations. In addition, each role carries a set of particular issues and concerns which the practitioner-researcher may translate into researchable questions and hypotheses.

As a pupil service worker, a school social worker has the opportunity to hear and discuss the problems facing school systems both today and in the future. Many of these problems are likely to influence the school system's expectations of the social worker's performance. For example, a school system may be expanding or contracting in size. If it is expanding, there may be more demand for school social work services. These increased demands may result in interruption or discontinuance of already existing services. If the school system is contracting in size, school closings or budget cuts may in effect delete some social work positions and increase the service demands on the remainder.

In the face of such problems, practitioner-researchers may ask: Are the current and anticipated changes in the school system associated with corresponding changes in service delivery patterns and expectations of school social work performance? At what cost to school social workers and their clients? With what benefits? School social workers may seek to answer these and other questions through two kinds of program evaluation studies. Some of the questions may be best answered through formative evaluation, a process approach in which data are collected periodically and provide ongoing corrective feedback to program participants. Other questions may be best answered through data collected at the end of a service delivery effort. Such summative evaluation approaches provide data to be used in the design of new service delivery efforts. Still other questions require both formative and summative evaluation approaches (Caro, 1977; Shadish & Reichardt, 1987).

In many school systems, social workers, psychologists, and special education teachers are assigned as a team to one or more schools. The role functioning of this team can have many effects on the team members, the school staff, and the children being served. For example, the evaluation procedure for special education placement is dictated by law. The actual implementation of the law, however, may be handled in many different ways. Some schools have team committee meetings at which relevant staff have an opportunity to discuss and plan for a particular child and his or her parents in the evaluation process. In other schools a case manager informs each pupil personnel specialist that his or her particular evaluation skills are needed in relation to a particular child. In this latter approach there is often little coordination of team roles or systematic diagnostic thinking in relation to an individual case. Upon noting these differences, practitioner-researchers might ask questions about the differential effects these two methods of teamwork have on the role performance and job satisfaction of staff members and with what cost and benefit to clients.

When working with teachers, a social worker may discover that a referral was made because of the teacher's deficits rather than the child's needs. A teacher may refer a child because s/he does not know how to tell a family about negative behavior or because s/he fears the family's reaction to this type of information. A particular child may also trigger a personal reaction in a teacher, either as a reminder of the teacher's own life experiences or as a trigger of the teacher's unconscious needs. The practitioner-researcher might well ask: What is the social worker's role in these two situations? What are the program implications of these two situations? Is there a relationship between type of referrals, classroom climate, teacher experiences and needs, and actual service needs of the child/family? Similar questions might be asked in terms of administrative referrals.

When providing direct services to children, school social workers may become aware not only of their service delivery roles but also of their program designer roles as they note patterns or trends among the children they serve. For example, in today's society, geographic mobility of families may be a primary force affecting a child's feelings of separation and loss and sense of belonging and identity. For those social workers whose schools are absorbing numbers of Hispanic, Asian and African refugees, problems of loss and identity are especially notable. The practitioner-researcher might well ask: Is the school social worker's role different when dealing with the geographic mobility problems of refugee and non-refugee children? Are the needs of the children different? Should the service delivery programs be different?

Timberlake, Sabatino, and Hooper (1982) found that the multiple practice roles of school social workers frequently include eleven tasks which cluster statistically and conceptually into three dimensions. The first dimension highlights the multidisciplinary team aspects of direct and indirect service and includes three tasks: consultation, short-term counseling, and diagnostic assessment. The second dimension highlights direct service provision and includes six tasks: individual counseling of children, concrete services, crisis intervention, individual counseling of parents, home visits, and referrals. The third dimension highlights data collection and information and includes two tasks: multiple agency collaboration and social case histories. The practitioner-researcher might ask: In what way does the performance of each practice dimension or task enhance the role effectiveness of school social workers? How does the weighting given each task by school social workers impact on the design of school social work practice? What constitutes effective performance of each task?

## Psychosocial Functioning of the Child

A psychosocial theoretical perspective focuses on the social functioning of the child in the school situation and those aspects of the child's home environment which are associated with functioning at school. In order to have a clear unit of attention the practitioner-researcher needs to draw conceptual boundaries around the separate transactions of the child. For example, the child-in-home-and-community situation would be one transactional area and the child-in-school situation another. A third transactional area would include the interaction between the two situations.

Such partializing for purposes of assessment provides clarity in setting goals for change, designing intervention strategies, and measuring accomplishments in relation to school and home. Suppose for example that one teacher refers a number of active, aggressive male students to the social worker. A psychosocial practice model would simultaneously assess: (1) persons--the need for direct intervention with each individual child and with the group of aggressive children; and (2) environment--the need for direct intervention with the teacher in relation to the handling of aggressive behavior in the classroom as well as the need for direct intervention in the family and community environments.

Assessing these intervention needs and establishing intervention goals requires simultaneous attention to the internal psychodynamics of each person and his or her functioning within specific social environments. Designing intervention strategies to correct psychodynamic deficits may include both direct intervention and referral. Designing intervention strategies to improve social functioning in the classroom may include both social work intervention with individuals (or with a group) and educational remediation. Environmental modification--that is, changing the teacher's handling of aggressive behavior through consultation or educational guidance--may also be indicated.

The desired overall outcome goal of these combined intervention strategies would be a decrease in aggressive behavior. The operational measures of change, however, would be based on less global outcomes such as: the frequency of specified aggressive actions with peers; the frequency of positive peer interactions; academic achievement; the frequency of specified aggressive actions with the teacher; the frequency of positive interactions with the teacher; or the frequency with which aggression is channeled toward a sanctioned mode of behavior (sports, art, achievement, time-out spot). The point is that change occurs slowly and unevenly so that several short- and long-term goals and corresponding operational outcome measures are needed.

A psychosocial perspective lends itself to many questions of interest to school social work practitioner-researchers. For example: What is a particular pupil's constitutional makeup? What are the pupil's coping/adapting skills for the various stages of life development? What is the pupil's ability to separate from home? What is the pupil's ability to enter and function in new networks of peers and adults? How are these dimensions integrated for the specific purpose of learning? As the practitioner-researcher focuses on these or other questions arising from a psychosocial practice model, s/he may begin to think not only of the one child under consideration but also of other children with similar abilities or problems. Thus, this practice approach lends itself not only to single-system and time series design studies but also to designs using aggregate data. In the first design, one pupil-in-situation is studied in depth over time with the research feedback correcting the intervention throughout. In the second, individual pupils with selected problems who are referred over the years become the data base for knowledge building about the particular problem under consideration. In the last instance, numbers of pupils with similar problems in similar situations are studied as a cohort in order to identify group trends.

## Integrating Psychosocial and Educational Perspectives

Social work is usually conceptualized as intervening at the interface between persons and their environments, in the transactions between persons and their environments, or in the interactions between the two. Yet treatment outcomes are usually described only in terms of changes in either persons or environments rather than in terms of changes in interface or interactions. For school social work the conceptualization of treatment outcomes in the interactional terms associated with child in classroom environment is critical if social work is to be perceived as central to the primary mission of the school setting.

The design of procedures for studying interaction sequences between children and their classroom environments requires a common description

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system for persons and environments and some decisions about which aspects of each interaction to examine. If adjustment is conceived of as the quality of the fit between the characteristics of the person and the properties of the environment to which the person is commonly exposed, the school social worker assumes that the better the fit between the child and the classroom environment, the more favorable the consequences for the child.

Of central concern to Boards of Education and educational administrators is the impact of school social work on the central mission of education--the teaching and learning process. Without abandoning the unique contributions of social work in educational settings, a body of theory, practice, and research knowledge that explicitly incorporates educational variables, processes, and outcomes is needed to provide a concrete answer to the key question: What do school social workers contribute to the educational process? To address this question, school social workers must move beyond faculty accolades and anecdotal illustrations about their educational impact to clearly defined interactional models of school social work practice which use theories, concepts, problem statements, hypotheses, and interventions drawn specifically from education. In these instances, practitioner-researchers use the expected components of social work knowledge and research design as the foundation, but move beyond them in identifying and choosing educational concepts for study and then in clarifying their importance and meaning for school social work intervention. The persuasive reason underlying the choice of person/environment variables for a school social work research and demonstration practice model is their clear association with educational progress.

A multivariate design which integrates both educational and psychosocial theories might select an educational framework and use Piaget's stages and phases of cognitive development as the theoretical lens for focusing on possible reasons for a child's negative classroom behavior. In this instance the research question becomes: What is the negative impact on a child's classroom behavior when s/he has not yet mastered an expected cognitive skill? Has the child "forgotten" his or her daily assignment, or does his concept of seriation need to be strengthened? A school social work practice model built on Piaget's theory would focus on social work interventions designed to help students master deficient cognitive skills and thereby bring about appropriate classroom behavior and a lowered probability of identification of students as academically deficient. Behavior, communication, and learning theories similarly offer rich foundations for studies which begin with an educational framework.

Practitioner-researchers might also build integrative models from the social work perspective and move toward integrating educational theories and practices. For instance, school social workers can easily identify those "school problems" which, in reality, are universal to all school children; that is, entrance into elementary school, promotion to first grade together with the expected change from kindergarten socialization skills to educational task mastery, peer problems, puberty, dating, and graduation. Several psychosocial theories are available to examine these age-specific developmental problems of schooling--specifically, object relations, symbolic interaction, psychoanalytic, and social learning theories. By focusing on these chronological ages which routinely bring about educational life crises, practitioner-researchers have the opportunity to provide solid school social work services for all students under the rubric of resolving those developmental school problems inherent for students and teachers even under the best of circumstances. By developing models of practice which serve these children and the teaching staff, social work services are seen by teachers and principals as more directly related to the needs of the school and are therefore more relevant to the educational system. For example, kindergarteners can be assisted with separation anxiety through an orientation program which identifies and practices expected classroom behaviors such as self-control, cooperation, and paying attention.

Another possible approach from an educational standpoint is identification of those life events which can negatively influence a student's school progress and then the creation of preventive services. Such life events include (among others): pregnancy; loss of parents through divorce or death; suicide of boy/girlfriend; family moves; and drug, sexual, or physical abuse. Again, the service provided by the school social worker for these problems is best received when requested from the school and offered in a format perceived as relevant by the school. In some instances counseling or educational psychology techniques may be the method of choice. For instance, a sex education program using a didactic approach or pencil and paper tasks may be perceived as the expected intervention for high-risk students. The practitioner-researcher's tasks in this instance are first to develop the connection between the underlying psychosocial theory, the problem, and the intervention; that is, to explain the school problem in relation to both theory and setting as well as the relevance of this particular model of treatment. Second, the practitioner-researcher develops appropriate research methodology and measurement tools.

By identifying age-specific tasks and developmental phase-specific accomplishments as important areas of practice research, the school social worker encounters a delicate and controversial issue which needs exploring. Much as school social workers might prefer not to skew their practice models toward preventive group services, they must acknowledge that since the school system serves all children the volume of cases handled by the school social worker impacts on the system's perception of the value of social work services. For this reason as well as the social work profession's knowledge and understanding of the inherent risks for children of unresolved life crises, group intervention models may demonstrate the greatest impact on assisting the teaching-learning process. In this way, school social work services may create the desirable image of having a universal function in education--through serving all school children at different points in time and for different reasons--rather than the less central image involved in the narrowed function of pupil services in special education cases.

Some social work practitioner-researchers might argue that it is not appropriate to include variables related to the setting of the research in the method and design of a study. However, the reality for a social worker in a host setting with limited financial resources is a major emphasis on demonstrating the direct relationship between the contribution of the guest profession and the production of the host setting. Otherwise, school social workers will find that they have built their own barriers to funding their positions and have instead created a rationale for discontinuing their services.

### Identifying Areas for Future Research

Regardless of the theoretical perspective chosen, research is needed in the following six areas: school as mediating environment, utilization of school social work services, value dilemmas in school social work, issues of consumerism and local accountability, the actual impact of legistatively mandated program changes on children's learning and development, and clinical social work practice in schools.

#### School as a Mediating Environment

School social workers have long observed that the positive and negative forces of the school system impact on children's learning and growth and on the patterns of social service delivery. For example, the school setting serves as the physical and social environment within which children learn new things and accomplish many developmental tasks. Yet at times the school environment may inhibit learning for individual children or certain groups of children. In addition, the school setting serves as the mediating social structure within which school social work services are delivered.

These practice observations about the impact of the school environment translate easily into researchable issues: (1) the influence of school environments on child growth and development and performance in school; (2) the influence of schools on the quality of social work practice in school systems; (3) the influence of school system programs and personnel on the quality of social service delivery; and (4) the impact of federal education legislation on social work service delivery in schools.

Research questions about child/school compatibility as evidenced by learning, social behavior, and growth and development usually involve a wide range of variables. To explain learning problems, for example, such variables as age, intelligence, achievement motivation, physical health, psychodynamic factors, social relationship patterns, stressors, family circumstances, classroom structure, classroom climate, style of teacher, and subject matter (to name only a few) must be taken into account. In other words, research questions about child/school compatibility involve multiple variables in order to account for as much of the variation among children as possible.

Research questions about the environmental context within which school social work practice occurs focus on the conditions for effective intervention. These research issues include the multiple relationships among child problems or child development needs to prevent problems, school structures, type of social work intervention, and outcome of the intervention as measured by child functioning in school.

Research questions about various personnel relationships within the school system focus on the diverse interests which may either support or distort the goals and processes of social service delivery. That is, the research issues revolve around the social dimensions of power and conflict in relation to the effectiveness of school social work practice or the multiple role positions of school social workers. Consider, for example, issues about who may officially diagnose a child and provide certain services. Or consider whether social work methodologies that are similar to the usual academic activities are more acceptable in a school setting than methodologies that are markedly different (for example--didactic/cognitive intervention approaches versus psychodynamic therapy, group versus one-to-one, staff training versus professional self-awareness through supervision, or behavior modification versus psychodynamic intervention).

## Utilization of School Social Work Services

Why does a school system need school social work practitioners? The answers to this question are crucial to the future of social work practice in the schools. In this era of scarce funding, school social workers are finding it increasingly necessary to prove that their services are viable and essential in relation to educational functions and goals. The hard reality is that many school social work positions as well as educational programs are funded through county, state, and federal monies. For the most part, these governmental funds are designated for population- and problem-oriented educational programs.

If social workers wish to remain in school settings they need to document their usefulness to these targeted educational programs with empirical data in four areas--system development, system maintenance, systems linkage, and direct client intervention (Lister, 1987). For example: How did the school social worker develop a service delivery system in relation to specific populations and problems? How does the school social worker, in collaboration with other professionals in the schools, maintain and enhance existing services for the targeted populations and problem areas? How frequently does the school social worker connect specific clients with relevant community resources? What clinical services does the school social worker provide in relation to the targeted populations and problems?

In addition to the quantity of service provided, school social workers are concerned with the qualitative impact of the service. Similarly, they need to demonstrate their effectiveness and efficiency as an educational service component for special target populations and problems.

In order to demonstrate their relevance to educational systems, school social workers must couch their practice questions in the terminology and context of educational goals. For example, does social work intervention with depressed children with learning problems result in decreased depressive behavior and affect and increased achievement in the classroom? Such phrasing of the research question does not exclude studying basic social work practice principles. Instead, the use of educational terminology and goals facilitates building models of social work practice relevant to and understandable by the host setting.

P.L. 94-142 provides the basis for funding individualized educational programs and support services for children with the following handicapping conditions: deaf/hard of hearing, orthopedically impaired, multi-handicapped, other health impairment, mentally retarded, specific learning disability, and seriously emotionally disturbed. Programs have also been established for refugee children, bilingual children, pregnant teenagers, and truants. In addition, programs have been funded to meet the specific service needs of inner-city youth and of children in need of alternative educational strategies. But what do school social workers actually do with these targeted groups of children and their families? In relation to what problems of coping with which aspects of school? With what outcomes? By asking these questions, practitioner-researchers will produce explanations not only about what happens in the transactional process between social worker and client, but also about changes in the problem itself as a function of an outgoing intervention.

In order to produce meaningful explanations, however, the intervention methodology of the previously discussed programs must be conceptually and operationally defined in relation to the specific social problem of concern to the school system, the target group, the desired outcome, and the specific intervention methodology and techniques for achieving that outcome. The research findings need to show which aspects of the social work intervention are associated with change in which parts of the problem.

In summary, the profession needs practice research to test the effectiveness of social work service in educational settings. Practice research should document the effectiveness and efficiency of social work intervention in relation to special populations targeted by the educational system. Practice research should also simultaneously maintain a commitment to develop knowledge for the social work profession. After developing a data base in the area of rehabilitative practice with targeted problems and populations, practitioner-researchers can move into the real frontier for school social work research--preventive practice for children-at-risk.

### Value Dilemmas

Social work has a set of commitments to certain values and ethics. A school social worker must also learn the values and ethics of educators and be able to identify areas of potential conflict between the two sets of professional values. Potential value conflicts between the two professions may be in relation to their preferred instrumentalities for dealing with people, preferred conceptualizations of people, or preferred outcomes for people (Levy, 1973). Where the two sets of values conflict, professional ethics dictate that the school social work practitioner opt for outcomes that meet the need of the consumer and his or her environment. In these instances where interprofessional values conflict, a question should be raised about social work responsibility in a host setting: Is the social worker responsible only to the consumer of educational services, to members of the team, or to an overall resolution of the problem at hand?

Using the multiple-role perspective, a practitioner-researcher can identify many areas of potential conflict between social work and education. For example, in the role of pupil service worker a school social worker may value the use of peer consultation with teachers or fellow social workers as a vehicle for continuing professional growth and for improving service delivery. Within the hierarchical organizational structure of the school system the peer method of case discussion and professional growth may, however, be viewed as undermining the authority of the pupil service director and, thereby, negatively affecting service delivery and staff development. The question for study thus becomes the impact of these two approaches on professional growth and service delivery.

P.L. 94-142 provides a second example of a value dilemma. The law specifies that families have a right to a copy of all evaluations undertaken with their children by a public school system. The method of providing this information may become a source of value conflict between team members. Some team members may believe that furnishing a written copy of an evaluation report satisfies the legal requirements. By contrast, school social workers have traditionally valued the assessment process and its subsequent reports as part of the whole process of professional intervention. In other words, social workers value the family's right to respond to the evaluation process and material, the intervention plan, and the evaluators. Does this value difference in family participation, as evidenced in the presentation of evaluation material, affect families' styles of using the evaluation and recommendations? If so, which families are affected? In what ways?

### Issues of Consumerism and Local Accountability

Each school extends, modifies, or curtails its services according to local conditions and consumer advocacy groups. Although the parameters of school social work are officially defined by administrative policies, actual service delivery is strongly influenced by the particular school and community setting in which the intervention occurs. An important research area for school social workers, therefore, is the way in which their own school(s) extends, modifies, or curtails its services in an effort to be in line with local conditions and consumer advocacy groups.

Accountability studies provide two basic types of outcome indicators. On the one hand, such studies are designed to provide service information generalizable to comparable programs about the extent to which: (1) a specified group of children is being served; (2) the incidence of newly identified cases is reduced; (3) there are apparent changes in the target population and problems; and (4) children, parents, and educators are satisfied with the services provided. On the other hand, they are designed to assess and improve the effectiveness and efficiency of social service delivery within their own local school(s) and school system. This second group of studies would provide information about the extent to which school social service provision is consistent with: the school's goals, priorities, and programs; quality school social work practice; and the needs and priorities of local constituents. Both groups of studies provide opportunities for better planning, program design, and quality social work service.

### Legislatively Mandated Program Changes

Legislatively mandated program changes are usually designed to: (1) improve core educational services and thus facilitate teaching and learning; (2) improve the quality of childhood and thereby facilitate learning; or (3) decrease the cost of core and supportive educational services. Since the major aim of such legislation is overall improvement of the educational system, evaluating change has become increasingly important because change has all too often been narrowly measured in terms of participants rather than documentation of the real positive or negative impact of these program changes on the educational well-being of the children. For example, with some of the Title XX services such as free lunches and supplementary math programs, the social work concerns are with the child's affective response to the service and with possible scapegoating by children not receiving the service. With P.L. 94-142's mandated education in the least restrictive environment, social workers are increasingly concerned about the child's psychosocial functioning in mainstream classroom settings and the stress on the child, the classroom group, and the teacher. With the bilingual educational programming offered refugee children, questions arise about substantive learning of educational content, socialization to mainstream culture, and maintaining cultural pluralism.

In general, research questions about federal education legislation focus on its direct and indirect impact on the various aspects of social work service delivery in the schools. Does the legislation shift the balance of the multiple roles of the school social worker? Does it impact on the school social worker's focus on person and environment? If so, with what effect?

### Clinical Practice

Confronted with the diversity of clinical services needed in the schools and the multiplicity of theories of change and models of social work practice available, school social workers tend to describe their clinical practice orientation as eclectic; that is, as including a bit of everything depending on the situation. Yet given today's credo of specificity, such generality and imprecision serves neither the child, the profession, nor scientific endeavor. What is the clinical practice orientation of school social workers? What constitutes good clinical social work practice in the schools? Are school social work services delivered in accordance with theory, empirical evidence, and accepted beliefs about good social work practice in host settings? To answer these questions, school social workers need to develop and articulate a more sophisticated conception of the treatment process *per se* as well as a plan for its evaluation. This task involves reviewing the actual process of clinical service with children and their parents from intake through termination to determine whether the service complies with what is considered appropriate, acceptable, and adequate.

Drawing from the Hollis (1964) tradition, most school social workers acknowledge the sequential nature of treatment activities, temporally differentiated phases of treatment, and the desirability of *a priori* planning of multidimensional interventions in relation to desired outcomes. In this view, the structural framework for models of clinical social work practice thus involves spelling out technical operations that are: (1) grounded in a coherent theoretical framework applicable to social work practice in an educational setting; (2) inextricably embedded in a productive interpersonal relationship between social worker and client; and (3) designed to produce constructive changes in problems associated with the fit between children and their school environments.

The changes produced by these technologies may be depicted as three distinct treatment evaluation paradigms: outcome, prescriptive process, and treatment process. The outcome paradigm represents the more usual type of treatment program evaluation in that treatment goals are conceptualized in terms of the problem addressed, then stated in terms of the reciprocal continuous interchange between persons and environmental situations or between persons (each of whom represents situations for the other). Goal accomplishment in outcome paradigm is measured at the end of treatment. This paradigm addresses questions such as: Did the child's attention span and classroom behavior improve? Did the child's absences cease? Did the child stop fighting at recess?

The prescriptive process paradigm views the school social worker's statements as either implicitly conveying or explicitly spelling out how the child is to be in the school environment. In this paradigm, change is measured by assessing the degree to which the child moves along those prescribed dimensions and evidences those preferred ways of being and behaving in school. This paradigm addresses questions which depict the additive, integrative aspects of change during specified time periods. For example, during the past week, did the child do his homework, fight less at recess, or seem less tearful and frightened?

In the treatment process paradigm change is assessed in terms of the relational processes or patterns of recurrent interactions which occur within the treatment context. It is anticipated that when the pattern of the processes or interactions changes, the child/social worker treatment relationship has changed. While it is to be hoped that changes occurring within the treatment will ultimately be apparent in the child's school and home environments, such external changes are not the focus of measurement. In studying strategic treatment processes and interactions, these studies address such questions as: What works in the treatment? How does it work? Does a specific technique make a meaningful difference? While important for the development of social work treatment methodologies, the usefulness of process paradigm research for schools rests with the social worker's ability to identify the interpersonal treatment issues which are repeated in classroom behavior.

### Assuring Quality Research

Research studies should be an integral part of service design and delivery in order to provide the data base necessary for developing models of school social work practice. Research questions in school settings are multivariate in nature and include a combination of: (1) person/environment variables--subjects' characteristics, behaviors, attitudes, and presenting problem, social workers' characteristics, or behavior, and setting characteristics; (2) process variables--social work intervention methodology, techniques, processes; and (3) outcome variables--changes in attitudes and behaviors, environmental structures and processes, and person/environment compatibility. There are times, however, when research studies using a simple or limited set of variables would be beneficial in clarifying a particular problem area.

The preferred studies would be concerned with the impact of clearly defined components of school social work practice. They would attempt to demonstrate direct relationships between the methodology, processes, and techniques of social work intervention and child/parent/teacher/school system outcomes in relation to the presenting problem. For studies to measure social work effectiveness in problem-solving within the school setting, the theory base of the practice model must be relevant to the problem, the intervention, the setting, and the desired outcome. For example, object relations theory may be used as a partial explanation of learning problems associated with losses precipitated by family moves or breakup, social work intervention for the depressive reaction to separation and loss, and the desired outcomes of improved ability to learn and to establish new social relationships. In this instance, the theory is used to explain the problem, design the intervention, and measure the outcome in relation to the host setting. Outcome is measured not only as directly observable behavior changes but also as cognitive and affective changes. Outcome measures must include both subjective and objective indices of change.

Rather than being primarily concerned with generalizablity of the findings, the designs of initial studies in an area of school social work practice should focus on adequately controlling threats to internal validity. They should be designed so as to be replicable at minimal cost by large numbers of practitioner-researchers. Exploratory studies with small samples or studies with single-system designs will thereby achieve increasing generalizability through succeeding replications.

## Accepting the Challenge

School social workers have sought recognition within the public school system for many years. With the advent of P.L. 94-142, school social workers not only have a chance to achieve recognition within the public schools by demonstrating empirically the usefulness of what they do, but also a chance to assume a leadership position within the profession in relation to knowledge building from an empirical data base. Real contributions to school social work theory and practice will grow out of theoretical analyses of the major social work practice and policy issues in host settings such as schools, collection of empirical data central to these issues, and assessment of this data in the light of the theory and the mission of host settings.

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# Assessment in groups

**Sheldon D. Rose**

**The assessment process in group treatment has been underemphasized in the literature, but using the group as the context for assessment has advantages as well as limitations, as this article points out. The author outlines the major functions of assessment in groups and details specific procedures used in cognitive-behavioral treatment groups.**

The behavioral literature is replete with accounts of various aspects of individual assessment.[1] Although considerable overlap exists between methods of assessment used with a client in the therapeutic dyad and with clients in small groups, there are also both subtle and dramatic differences that need to be clarified. This article describes the aims, advantages, limitations, and strategies of assessment carried out in the small treatment group and provides a "how-to" technology of group assessment. The emphasis is primarily on those aspects of assessment that are unique to groups with a behavioral, cognitive, or problem-solving focus or that require special consideration when applied in such groups. Although in practice, assessment cannot be separated from therapeutic intervention, for the purposes of this article, description of therapeutic interventions has been omitted to a large degree; however, details of intervention in groups can be found elsewhere.[2]

The parameters of assessment are determined in part by the model of group treatment being used. This article describes an assessment process for groups that are based on theories of problem-solving, cognitive social learning, and group dynamics. These theories suggest technologies that are used to help clients achieve better ways of managing stress, dealing with excessive fears, overcoming lack of emotional responsiveness, reducing deficiencies in social skills, improving self-control, and increasing problem-solving skills.

The model reported in this article, although widely used throughout the country, was primarily developed as part of the research and practice of the Interpersonal Skill Training and Research (ISTR) Project of the School of Social Work, University of Wisconsin-Madison. This group work approach has been used by students and staff of the ISTR Project with all age groups and various client populations, including alcoholics, diabetics, parents with problem children, abusive parents, and socially isolated, aggressive, hypertensive, or depressed individuals. Since assessment in such groups is an extensive area to be covered in one article, the reader will be referred to the appropriate assessment literature for descriptions of most of the specific tests mentioned.

## FUNCTIONS OF ASSESSMENT

Assessment serves several purposes in the small treatment group. Its first

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function is to ascertain whether a particular client can use the group effectively to achieve change. To make this decision, sufficient data must be collected regarding the client's previous group experiences, social skills, and feelings about group participation, as well as the intensity of the problem that brought the client to therapy. Of crucial concern is the client's level of social anxiety. If this reaches panic level in small groups, the group is not the appropriate initial context for treatment for this particular individual.

Once the worker decides that a given client should participate in treatment in a group, the second function of assessment is to help the worker decide the type and composition of group most suitable for that client and for other clients awaiting services or, alternatively, whether the client can be added to an already existing group. To make these decisions, the group worker must examine the data collected from all potential group members for common denominators in their problems as well as in their interests and the behavioral and cognitive skills that might unite them in a joint endeavor, indicate a common level of communication skills, or suggest that common treatment procedures are appropriate. In order to maximize the group's usefulness, the worker must also determine which members might serve as models of certain behaviors for other members of the group.

These two functions of assessment must be completed in the pregroup interview. A third function—laying the basis for establishing goals for individual treatment and for the group—can be carried out both in the pregroup interview and during the ongoing group process. These goals must be formulated in such a way as to point to an efficient, effective, and durable set of procedures for individual and group treatment. An additional function of assessment in groups is to ascertain the degree to which goals of the individual and group are being achieved and whether revision of goals or modification of treatment strategies is required so that goals can be more nearly approximated.

## LIMITATIONS AND ADVANTAGES

The group context both facilitates and detracts from carrying out the functions of assessment. First, the group therapist is limited by the theme of therapy in what can be assessed. The theme—which might be more effective management of stress, improved parenting skills, better social skills, or increased self-control—represents an explicit contract with members. Although it protects the members from the highly irrelevant contributions of individuals who do not stick to the central topic, it also serves to deter the exploration of idiosyncratic needs or problems that deviate dramatically from the agreed-on theme. In reaction to this constraint, many practitioners are moving away from the use of groups with limited themes.[3]

Since clients are not trained in professional ethics, the worker cannot guarantee that group members will hold in strict confidence intimate information disclosed by other clients, even though group members are strongly encouraged to hold to this rule. Failure to give this assurance may limit the topics or the depth of information a client is willing to share in the group.

The restricted time allotted to any one member at a given meeting is also a limitation in group assessment. In most treatment groups, the content of a meeting cannot be focused solely on the unique problems of one person without decreasing the satisfaction of most of the other group members. Each client needs to participate verbally in every meeting if he or she is to remain in the group or profit from it. Thus, the story of each person in the group must unfold gradually and often less systematically than in the therapeutic dyad. This characteristic of the group may work to the advantage of the more reluctant clients or those whose tempo of self-disclosure may be slower than most others.

Methods have been devised recently that may partially compensate individual members for the loss of time in a particular session. More emphasis is placed on homework assignments in which clients observe themselves or others, rehearse a behavior recently learned in the group, or try out a behavior in the real world. Success and failure in carrying out the assignments provide valuable data for further assessment every week. Professional interest is also growing in the use of natural environmental partners or buddies to collect data about a client.[4] Natural environmental partners are usually friends or family members trained by the client (who is trained by the worker) to monitor the client's behavior. Buddies are fellow group members who do the same thing.

Although the limitations on assessment that stem from the group context may be quite restrictive for some workers, in many instances, with appropriate preparation, they can be turned around to serve as advantages. In addition, some attributes inherent in the structure of the group provide advantages in their own right. In the group, the worker can directly observe the interactions among clients as a sample of their real-life interactive patterns—for example, how they deal with attempts at domination or instances of submission by others, instructions from authority, expectations of others, criticism or praise, and other forms of social stress. Of course, the data on behavioral interaction available in a group are so extensive that a worker might require assistance from an observer with a formal observation schedule to systematize the collection of data.

The group provides data about individual clients' responses to the group, such as attraction to and satisfaction with the group; attendance, promptness, and participation at group meetings; and percentage of homework assignments completed. These data permit weekly evaluation of the ongoing group process.[5] The group provides a context for efficiently training its members in the application of various assessment techniques. It is important that clients actively participate in and understand their assessment since they are the source of most information about themselves. For this reason, clients learn to interview each other, to role-play, to provide feedback to others about how well they have played their roles and performed assignments outside the group, and to model appropriate assessment techniques for each other. The group provides an opportunity to explore some topics that an individual alone might not have been willing to consider.

The group often serves as a control on the accuracy of clients' statements about their behavior outside the group. It seems easier for most clients to deceive an individual worker than a large number of group members who have had similar experiences and are more likely to have reason to question distortions of the facts. Certain aspects of a client's problem may be discovered more readily by a group of people with similar problems than by a group worker.

The group provides multiple models for assessment skills. As each client provides information in the group, he or she models for every other client a way to communicate such information and a vocabulary for doing so. When the modeled behavior is desirable, the group worker may reinforce the model, further facilitating the likelihood of imitation.[6]

Meichenbaum points out that the group worker can use the client's behavior in the group for analyzing internal dialogues.[7] For example, if a client is particularly quiet in a session, the worker might ask the client to analyze his or her thinking processes in relation to the demand to participate.

## ASSESSMENT TIME PERIODS

Assessment is done before the group is organized, during group meetings, between group meetings, and after termination of the group (follow-up). In each time period, the focus of assessment shifts somewhat, although there is considerable overlap in the instruments used, sources of information, and purpose.

In the period before the group begins, the majority of information comes directly from the client through a semistructured interview, a role-play test, self-rated checklists and inventories, and, in the case of children, sociometric data obtained in the classroom. Except for the semistructured interview, all the measures that were used to collect data before the group started are repeated after treatment and at follow-up as a means of evaluating the outcome of treatment. When physiological variables are likely to impinge on treatment, such as in cases involving weight loss or anxiety management, a medical examination should also be required during the pregroup period.

During the meetings, data on individuals are collected by means of observation in the groups by observers, members' ratings of their satisfaction with group meetings, and recording of the members' attendance records and rates of assignment completion. These data are used to identify problems in the group, to evaluate ongoing group progress, and to ascertain the degree to which group goals are being attained.

Between meetings, data are collected by means of logs or diaries, "problem cards," and other self-monitoring procedures, which are explained later. The purpose of these data are to identify problem situations that are critical for each client and the cognitive, affective, and behavioral responses of the client to them. Data collected between meetings are usually monitored at the beginning of every meeting.

Postgroup data are collected immediately following each group meeting and after one or several follow-up periods ranging from three months to two years. The main purpose is to determine the effects of group treatment and whether these effects were lasting. Two other questions of concern are whether any other desirable or undesirable side effects (that is, effects that were not specified as goals of treatment) have resulted for the individual or his or her social environment and whether the changes that have occurred are satisfactory to all concerned. The instruments are generally the same ones used in the pregroup assessment. In addition, an interview is given that is somewhat different from the earlier one. This postgroup interview covers the client's (or significant others') perception of change in the client and his or her environment as well as any side effects that have been noted.

Except for the measures taken in the group, there is a great deal of similarity among assessment procedures used by individual workers, caseworkers, and group workers. Yet in examining the assessment procedures used in each phase in more detail, the reader will note differences in application, in specific questions asked or observations made, and in the involvement of group members in each others' assessment.

## PREGROUP ASSESSMENT

### Pregroup Interview

To determine whether an individual should be in a group, the worker first conducts a pregroup interview. The client is asked to describe earlier experiences in treatment and social groups as well as cognitive, emotional, and evaluative responses to these experiences. In particular, the client is asked how anxiety-producing these situations were and how he or she ended them. Did he or she drop out early? If so, why? If the individual has not had a successful experience in a small group within the last few years or describes serious psychological breakdown during or following an experience in a small group, group treatment may be too risky for this client. Such persons usually screen themselves out, but in a few cases the decision of whether a particular client should be admitted to the group or referred to individual treatment is left to the worker.

Once the worker has determined that an individual should be in a group, the worker must ascertain the composition of the group to which the client will be assigned. Several guidelines exist for using data from the pregroup interview and tests for this purpose. In general, groups are organized around common presenting problems, such as needs for training in parenting skills, anxiety control, ways to handle phobias, increased self-control in a given area (for example, drug or alcohol use, overeating, or smoking), and improvement of social skills. Because groups with clients who have similar problems can make more effective use of common intervention and assessment procedures and provide multiple models of prosocial and problem-solving behavior, most authors assume such groups are desirable (although exceptions have been noted earlier). The use of themes also makes it easier to recruit clients for new groups.

Thus, a client is usually assigned to a group of people whose identified focal problems are similar to his or her own. No matter how successful the group worker is in matching clients, in the author's experience there is always sufficient diversity among clients to provide each one with a variety of ideas, perspectives, and vicarious life experiences.

Some evidence exists (at least regarding parents' groups) that socioeducational diversity enhances therapy for more poorly educated people and does not impede the progress of the better educated.[8] However, clients' attraction to the group in its initial phase is enhanced by having roughly similar levels of communication skills among the members. All members should be able to talk to at least several others at a level each can understand and appreciate. Thus, for purposes of assigning clients to groups, assessment of communication and language skills is essential.

Not only is the pregroup interview a source of information for making assignments to a group, but it also provides the therapist with an opportunity to initiate exploration of situations with which the client has difficulty. The client is asked about situations that are sources of uncertainty, feelings of inadequacy, and anxiety. Of particular concern are the client's verbal and motor responses to these situations as well as his or her cognitive and affective responses. These situations and their responses are explored in more detail later in the group. The client is also asked whether he or she faces any situations in the immediate future that he or she is uncomfortable about. The reason for this emphasis on such problem situations is that it can provide a common intervention strategy in the group. Dealing with such situations provides a model for a systematic problem-solving process. Such a process allows for the maximum amount of involvement for all members in various roles, such as presenter of the situation, interviewer of the presenter, provider of new ideas or insights to the presenter, provider of group feedback in role-plays, and modeler of how to carry out new ways of dealing with or thinking about situations.

Another important question asked during the interview is what problems brought the client to the group. When possible, this question is also framed in a situational context, that is, in such a way as to elicit specific situations in which the problem occurred. The interviewer also explores with each client any social, economic, or physical circumstances that the client believes may affect the outcome or process of treatment. When a client has difficulty answering this question, asking the client to describe in detail a recent typical day often provides leads for further exploration of specific situational material for assessment. The pregroup interview is rarely complete. It merely provides leads for further interviews between group members during the early phase of treatment.[9]

### Role-Play Test

Immediately following the interview, a series of role-play and paper-and-pencil tests are given to the client. The choice of specific tests is determined in part by the results of the interview and in part by the availability of groups whose central themes are compatible with the client's presenting problem.

The audio- or videotaped role-play or simulation test is central to the situational focus in assessment. The client is presented, either on tape or by the tester, with a description of a number of situations, one at a time. The situations are similar to ones the client and others with similar problems have described in their individual interviews. Each client is asked to imagine himself or herself in the situation and to give verbal and motor responses just as if he or she were in that situation. Following this, the client is asked to describe affective and cognitive responses to the situation. The verbal responses are recorded on either videotape or audiotape and are later coded, primarily for social competence. These data are used first to determine the kinds of situations with which each client has difficulty and second as a basis of comparison for evaluating changes following treatment. Role-play also serves as a model for the client of the kinds of situations he or she should bring to the group once the meetings begin.

The client is also asked to rate his or her anxiety in each of the situations as well as satisfaction with his or her responses. The satisfaction data are used to estimate whether the client perceives the situation to be a problem. Also, if the client seems to be satisfied with what appear to be ineffective responses or is dissatisfied with the seemingly effective ones, the problem may be cognitive as well as, or instead of, behavioral.

Normally, each client is presented with anywhere from six to twenty-four different situations. The population of situations from which items are selected can be derived from a number of highly developed role-play tests for different populations, including those developed by Berger for the institutionalized elderly, by Freedman for male adolescents, by Rosenthal for female adolescents, by DeLange for women in general, by Bates for mildly retarded adults, by Edleson and Rose for prepuberal children, by Clark for institutionalized psychiatric patients, by Schinke for psychiatric outpatients, and by Rose and Hanusa for parents.[10] Most of these tests have been developed following the recommendations of Goldfried and D'Zurilla.[11]

Role-play tests are not without limitations, however. Skill in role-play is sometimes confounded with the behavioral skills the test is designed to measure. Generalization of role-played behavior to real life has been supported anecdotally, but not empirically.[12] For this reason, other tests must be used to evaluate outcomes of treatment in addition to role-play, even though these may have even less face validity than role-play tests. Prominent among these are behavioral self-rating checklists and inventories.

### Self-Rating Tests

During the same interview at which the role-play test is first administered, the client is given one or more self-rating checklists or inventories to fill out. The specific checklist used depends on the theme of the group and the general data obtained in the pregroup interview. These tests are sometimes also given after the group begins, especially if many tests are used. Although the same checklists are used for most clients so that intragroup comparison and comparison with other similar groups are possible, often individuals are given checklists developed by the group members themselves based on the interview data.

Some examples of commonly used inventories with particular themes are the following: for aggressive, unassertive, or shy individuals, the Gambrill-Richey Assertion Inventory or the scale by Rathus; for individuals who are primarily depressed, the Beck and Beamesderfer Depression Inventory; for those in couples' groups, an inventory by Stuart and Stuart and the Locke-Wallace Marital Adjustment Inventory; for those in parents' groups, the Walker and Miller behavior checklists for children; and for those complaining of anxiety-related problems, the S-R Inventory of Anxiousness by Endler, Hunt, and Rosenstein.[13]

Because developing a reinforcement repertoire for each person is important, a reinforcement survey is used.[14] In recent groups, members have interviewed each other using the reinforcement survey as an interview guide; this provided training in interviewing as well as more detailed answers on the survey.

Checklists and inventories have their difficulties. They may reflect not only the client's self-perceptions of behavior but also may indicate previous experience with taking tests, motivational variation among clients, and other response sets. Yet checklists have not been shown to be more invalid or unreliable than most other forms of data collection.[15]

Often clients are willing to indicate on checklists problems they are unwilling to discuss in the group. The checklists permit the worker to suggest areas or situations the client might wish to consider presenting to the group. Checklists are also used to evaluate changes in attitudes and self-perception but do not appear to indicate change following treatment as readily as the role-play test already discussed and the sociometric test discussed later.

### Use of Tests in the Group

The question can be appropriately raised as to whether the client can be involved in filling out checklists or responding to simulated situations within the group rather than individually. If the group worker wishes to reduce the time he or she spends in pregroup assessment, it is quite possible to have a first group meeting in which all the individual paper-and-pencil assessment data are collected at the same time, while group members are together. In this way, instead of spending a half hour per person to administer various inventories and checklists, the worker spends a total of a half hour for the whole group. However, some measures cannot be given in a group. For example, to avoid contamination effects, the initial role-play test must be given in a situation in which each client is alone with the tester. Later, the test can be given again in the group.

Responses to the checklists can be presented to the group by each member and discussed with fellow members as part of training and practice in self-disclosure. Often people will change their minds or sharpen the definition of their problem as a result of these discussions, and these changes should be noted in the early phases of assessment. Clients are often willing to disclose more about themselves after such a discussion; thus, filling out the checklist a second time would result in new information that can be used in the subsequent design of the treatment program. The same procedure can be used with the role-play test. Situations from the test can be performed by a client in the group meeting and coded immediately after by the other group members. Although these situations were presented initially as part of the pregroup evaluation, they are not restricted to pre- and postgroup use.

However, these data are regarded as confidential. For this reason, disclosure of one's test results in the group must be a decision of each member, uninfluenced by group pressure. Furthermore, the principle of confidentiality must be reaffirmed before these revelations take place in the group.

### Sociometric Measures

Sociometric tests refer to questions posed to clients to elicit their positive, neutral, and/or negative evaluations of their relationships with others in a group. Workers at the ISTR Project have used such tests only with children under the age of 13.[16] They are not used to estimate relationships in the treatment group but rather in the child's classroom.

The sociometric test has many variations. On the type of measure used at the ISTR Project, each child in a class that contains potential group members is asked to rate every other child on a five-point scale indicating how much the child would like to work or play with the other person. In most cases, the children referred for treatment turn out to be the children with the lowest status in the classroom. In cases when a referred child has a high (frequently chosen) status, this is discussed with the teacher to understand why the referral was made. In recent research, the sociometric test was found to be the most sensitive instrument for demonstrating change of behavior in children.[17] Since the sociometric index represents the peers' perception of an individual's likability, an increase on such an index would appear to be a desirable and important outcome.

## ASSESSMENT DURING THE GROUP

In addition to the tests already described, data are collected during and between meetings by means of diaries and other self-monitoring procedures, peer or buddy monitoring, observations in the groups, and self-report evaluations of the group experience. Of these, the diaries provide the richest source of information to construct situations for consideration in the group.

### Diaries

As used in treatment, keeping a diary refers to the activity of recording stressful events as they occur outside the group. Since problem situations play such an important role in

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treatment and assessment, all clients are asked to keep a diary, but clients vary in their skill in observing, writing down, and reporting such situations. To train them in these skills, the worker provides examples of descriptions at one meeting and asks them to describe similar situations from their own experience. These practice situations are discussed in terms of the following questions:

- Is the situation relevant to the client?
- Is the situation stressful or potentially stressful to the client?
- Does the situation consist primarily of external events that have already occurred or of imagined events that will or might happen in the future?
- Is there a critical moment in the situation in which the client is expected to respond or expects that he or she should make some response?
- Is the client's description of the situation sufficiently specific that the rest of the group will have an accurate picture of what actually happened or what is expected to happen?
- If the event has actually happened, what was the verbal, motor, cognitive, and affective response of the client?
- What is the client's goal in the situation?

At the end of the session, the clients are instructed to keep a diary in which situations similar to the practice ones are recorded in such a way as to answer these questions. For the first week, only two situations are recorded, one that the client perceives was handled reasonably well and one that was not dealt with as well. At the next meeting, these situations are reviewed and evaluated in terms of the seven questions. The situations for which the questions can be answered are used subsequently as the basis for training the clients in new behaviors and new cognitions. Training may begin as soon as at least one problem situation is clarified.

The diaries are kept throughout therapy. Although the clients are initially asked to fill in only two situations between sessions, eventually they are encouraged to describe all potentially stressful situations and their responses. For clients for whom literacy is a problem, a tape recorder can be provided.

### Problem Cards

A variation of diaries, called "problem cards," was proposed by Goodman and further developed by Flowers.[18] Following Goodman's suggestion, two problem cards are filled in prior to each session. On each card, the client describes briefly a problem he or she is currently experiencing. The client also names an external rater who could judge any change in the client's coping patterns. Also, at any group session, the worker may write down any other problem that a client discloses but has not put on a card and request a rater for the problem. Flowers states that in groups he had worked with, only 10 percent of the problem cards involved situations in which no rater could be named.

At various intervals, usually eight to ten weeks, raters are asked to rate the individual on his or her effectiveness in coping with the problem. Group members also rate each other, so that members get feedback on their effectiveness from their peers as well. As might be expected, the correlations between ratings of group members and external raters are not very high.[19]

These data provide information not only on how well each client is doing with the specific problems he or she is working on in the group, but also on whether treatment generalizes to the problems not worked on in the group. Flowers describes ongoing research in this area, which promises to provide more information about the advantages and difficulties involved in the use of problem cards.[20]

In the limited experience of the ISTR Project with the technique, formulation of the problem was initially difficult for many clients. They had to be trained through the use of models and exercises to describe situations amenable to rating.

### Self-Monitoring

The diaries and problem cards are a unique form of self-monitoring, a method of observing one's own overt or cognitive behavior. Other, more precise forms of self-monitoring are also used, especially when unambiguous cognitive behavior or discrete overt behavior is the object of observation.

Self-monitoring requires the client to record his or her own behavior at specified intervals or under specific conditions in a systematic manner.[21] If done systematically, the results of self-monitoring may be used to evaluate the progress and outcome of treatment. This is often done in parent training and self-control training groups. In many groups, self-monitoring is used as an adjunct to other methods of assessment to determine the nature, intensity, and frequency of a specific component of the client's problem.

Self-monitoring is especially useful in groups when methods of external observation do not provide the private data necessary to assess cognitive behavior. For example, clients in self-control groups often count their urges to indulge in the substance they abuse (for example, cigarettes, drugs, food, or alcohol) as well as their overt and covert response to each urge. In parent training groups, members record the frequency of their experiences of anger, and sometimes the intensity of anxiety experienced by the client is recorded either periodically or during each stressful situation. Members of other groups keep track of "self-put-downs" or periodically record their level of depression on a scale of 1 ("extremely depressed") to 10 ("not at all depressed").

### Role-Play in the Group

Sometimes the description in the diary of a problem situation is not adequately clear to the group members or the worker. If clarity is not achieved through questioning, the client is asked to role-play the situation. To save the group's time, preparation for the role-play takes place in pairs or triads. One member in each subgroup prepares a role-play of a real event that occurred during the week, instructing one or more subgroup members in the role of the significant others. Eventually, the situations are presented to the entire group. It should be noted that such assessment role-play is designed merely to provide greater clarity about situations recorded in the diary and to give another perception of behavioral performance. In contrast, the role-play test is also used to evaluate outcome.

### Observations in the Group

Often role-playing does not provide the group worker with an adequate picture of how individuals respond to real-world stimuli. Sometimes observation by an outside observer of interaction within the group that is not role-played can give the worker a more realistic picture. Ideally, it might be better to observe behavior in the real world, but such opportunities may not be available because of practical or ethical considerations.

Observations in the group also provide a data base about how clients are using the group and whether group problems, such as conflict, domination of the group by a few members, or pairing off, exist. Unfortunately, most observational systems are either too cumbersome, too expensive, too unreliable, or of too questionable validity to be used readily by the group worker. In the past few years the ISTR Project has used a simple procedure that provides relevant information but is inexpensive to use, is of demonstrable reliability, and is beginning to demonstrate a reasonable level of validity.

This system involves the observer's noting every ten seconds the person who is speaking. The system also permits recording of situations when no one is speaking, the members are working in subgroups, or the speaker is not known. This method permits the worker to estimate how long each person speaks, the distribution of participation in the group, and the proportion of a client's participation to the total participation by group members and workers. This measure of participation is highly reliable (usually with indexes of agreement above 0.90), and its validity is attested to by the fact that it correlates positively with behavior change.[22] Observers can be trained to a 0.80 index of agreement in less than one hour. As a result, observers can be former group members, clients in the group who serve on a randomly rotated basis, students, or co-workers who alternate as group leader. People who have served as observers, whether clients, students, or therapists, have indicated that it is a valuable learning experience in its own right.

Unfortunately, such a simplistic system does not consider nonverbal communication or make use of subtle subcategories of behavior as do some other observational systems.[23] It does not even show to whom a comment was addressed. Early attempts to include this dimension increased training time, decreased reliability dramatically, and increased costs.

When more individualized and specific observations are required, each person in the group can select with the help of fellow group members one behavior to be observed and counted. Working in pairs, the members develop careful definitions of the behaviors and the conditions under which they are to be observed. Each pair designates an observer and a client. All those chosen as clients form a circle, and those chosen as observers form another circle around them. The "clients" interact in regard to the situations on which they are working; those in the outer circle observe their partners using the mutually determined observation system. At the halfway point in the meeting, "clients" and "observers" switch roles. One session is devoted to training and practice in observation. In this way, no costs are added for outside observers, although the tempo of treatment may be slowed. Trained observers may be used instead of group members to achieve a slight increase in reliability with a correspondingly large increase in cost.

Piper, Montvila, and McGihon have developed a complex observation system with twenty-four categories for observing individual behavior in a group, but issues of reliability, validity, and the cost of training are not yet settled.[24] Observation systems designed for children in the classroom have been used in children's groups.[25] However, these systems also use numerous categories, which makes training observers difficult.

### Responses to the Group

An individual cannot be helped if he or she does not come to group meetings or comes late and leaves early. Moreover, such behavior is a significant indication of motivation. For this reason, it is useful to determine indexes of attendance and promptness for each member and the group average for each meeting. Two other important responses to the group can be recorded and evaluated: the satisfaction of clients with each session and clients' rate of completion for homework assignments.

Attendance, participation, satisfaction, and rate of assignment completion have been shown to be multiply correlated with behavior change in group therapy ($R^2 = 0.84$).[26] Consequently, the group average and distribution on measures of these behaviors should provide weekly estimates of how well the group is progressing, and individual scores can be used to determine how well each client is responding to his or her experience. The method of recording participation has already been explained. The measurement and evaluation of the other behaviors will be examined briefly.

At the end of a meeting, all members evaluate their satisfaction with the session on a 6-point scale, with 1 indicating "low" satisfaction and 6 indicating "high" satisfaction. Although each individual has his or her own baseline, a rating of 3 or below usually indicates that some action is required or the individual will drop out of the group. Also of concern is a dramatic drop in the group average, for example, from 6 to 3.

The productivity index, or rate of completion of homework assignments, is estimated for each individual by dividing the number of homework assignments completed at a given session by the total number of assignments contracted for at the end of the previous meeting. The resulting percentage is considered indicative of the productivity of the meeting at which the assignments were contracted and prepared for. An assignment completion rate of less than 80 percent usually indicates low productivity. Often low rates of assignment completion indicate that the assignments were not adequately clarified or that the pace was too fast. When a low rate persists even after more careful explanations are given and lowered demands are made on a client, the client may have cognitive barriers to the group experience that need to be explored.

It should be noted that data on an individual cannot be interpreted without also looking at the group averages and distributions. For example, if the satisfaction of one individual is low but the average for the group is high, then the group worker is confronted with an individual problem. But a low group average suggests the existence of a group problem.

Because of the correlation of participation, productivity, attendance, and satisfaction with treatment outcome, a combination of high averages and low variation is generally the most desirable condition and suggests stable, protherapeutic norms such as willingness to work on problems, do homework, and participate in the group. When either antitherapeutic norms (low averages and little variance) or no norms (high variation) exist, group problems also exist.[27]

## CONCLUSION

The assessment process in group treatment has been underemphasized. Group workers in treatment settings appear to accept preliminary information and initial complaints at face value in determining treatment strategies. They do not obtain the detailed information required to decide whether a group is appropriate for the particular client, the kind of group that is appropriate, the type of goals the client can aim at while in the group, and whether the goals of each session and of treatment as a whole are attained.

Effective assessment requires pregroup interviews that explore the stressful situations the client is experiencing and his or her behavioral, cognitive, and affective responses to those situations. Information from these situations and subsequent contacts is needed to identify the client's resources and the barriers to the effectiveness of treatment. Interviews should be supplemented by role-play tests, paper-and-pencil tests, and observations in and out of the group to zero in on specific target areas. Sociometric testing may often be productive for children. Group data on such behavior as participation, satisfaction, attendance, and completion of assignments provide a basis of evaluating whether group problems exist and whether group goals are being attained.

Group members enhance each other's assessment by being maximally involved in testing and interviewing each other, collecting observational data, judging each other's role-play, and providing feedback in selecting individual goals. Such involvement not only increases the attraction to the group and among members, but also mobilizes the full power of the group as both the context of and means for assessment.

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# ASSESSING THE EFFECTIVENESS OF SCHOOL SOCIAL WORKERS: AN UPDATE FOCUSED ON SIMULATIONS, GRAPHICS, AND PEERS

Norma Radin

ABSTRACT: The evaluation paradigm presented in an earlier paper is updated in this chapter. Two modalities (types of measurements) are added: simulations and graphics. In addition, one of the criteria of success, views of significant others, is expanded to include the views of peers. Examples of the additions are provided and an application of the revised model to a proposed intervention is described.

"Assessing the Effectiveness of School Social Workers," published in Social Work in 1979, was based on a paper presented in Michigan at The Institute for School Social Workers in 1977. Ten years later, virtually all that was said in that report is still applicable; the need for accountability is perhaps even more pressing than it was a decade ago. However, some additions to the conceptualization of evaluation presented then are needed. These supplements will be discussed below and some concrete examples provided. The chapter will conclude with an illustration of how the revised evaluation paradigm can be applied to a proposal requesting funds for a social work project designed to reduce aggression by upper elementary school children.

The model presented in the 1979 publication indicated that practitioners in school settings wishing to evaluate their effectiveness should consider which of three criteria of success they will use in any given situation: the improved feelings and attitudes of the clients, the improved views of significant others, or indices of competent social functioning. School social workers must also select a modality to measure how effective they have been in meeting the chosen criterion. Seven possible modalities were suggested: hard data or objective reports of events; tests; observations; rating scales; questionnaires; interviews; and self-reports. The modalities and criteria were presented together in a chart along with examples of evaluation techniques for each criterion-modality combination. In this update of the model, three additions will be reviewed: two pertaining to the modalities, simulations and graphics; and one to the criteria of success, an expansion of the criterion of views of significant others to include the views of peers. In Table 1 appears a slightly abbreviated form of the 1979 chart, modified to include these additions.

## Supplement To Modalities For Evaluating Effectiveness

### Simulations

Sufficient data have now been collected (e.g., Spivak & Shure, 1974) to warrant supplementing the list of modalities with two new approaches to measurement. The first has been labeled "Simulations" (Asher & Hymel, 1981). In this methodology, children are presented with hypothetical problematic situations and asked to respond by saying what someone could do in that situation. Simulations were developed primarily to assess a child's social competence and are valuable because they permit clinicians to discern a child's knowledge of socially appropriate behavior. It cannot be assumed that the behavior observed is a valid depiction of all that the child understands in a social situation. For example, excessive anxiety or a severe case of scapegoating by peers may impede students behaving in a manner that they know is appropriate. However, if the simulation technique reveals that basic social knowledge is deficient, the first goal of an intervention may be to increase a pupil's knowledge of what peers expect and accept. A simulation technique can be very helpful in evaluating attainment of that goal because the children may not yet be able to demonstrate behaviorally that they have learned appropriate responses to other children's provocations and offers of friendship.

To provide a concrete example of the simulation approach, material will be described which was used in a study demonstrating that popular children had more social knowledge than unpopular children when the assessment was made independent of the existing peer group (Asher, Renshaw, Gerace, & Dor, 1979). The children were shown nine hypothetical problematic social situations and asked what the protagonist would do. (The protagonist was always the same gender as the child.) Three types of items were included: one concerned the problem of getting to know a new group of children, one pertained to the maintenance of social relations such as helping a friend, and the third focused on the

Table 1

Techniques of Assessing School Social Work Practice: An Update

| Modality | Criteria of Effectiveness | | |
|---|---|---|---|
| | Improved Feelings and Attitudes of Clients | Improved Views of Significant Others About Clients (Teachers, Parents, Peers) | Indices of Competent Social Functioning |
| Hard data (objective reports of events) | Suicide rates and attempts; acts of vandalism | Number of negative teacher reports to principals about child; verbatim reports of statements by parents during parent-teacher conferences | Attendance records; dropout rates; placement in or out of special education classes; pregnancy rates; employment records |
| Tests | n.a. | n.a | Standardized tests; project or teacher-designed tests (of factors such as academic achievement, adaptive behavior, and knowledge in special areas) |
| Observations (recordings of behaviors that were seen) | Minutes spent crying as reflections of feelings | Counts of verbalizations or behaviors of significant others regarding child or directed at child | Systematic observations in the classroom, playground, or at home of parent-child, teacher-child, and child-child interactions; counts of number of times peers approached client during given amount of time at recess |
| Rating scales (ratings of data on some dimension such as frequency or intensity) | Ratings completed by clients regarding their own feelings; Q-sorts | Teacher or parent ratings of specific behaviors of client; peer ratings of attractiveness or liking of classmates including client | Tape recordings of dyadic interactions or group discussions rated in blind judging for evidence of competence of participants |

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| Questionnaires (instruments with questions that do not have right and wrong answers) | Structured and semistructured assessment of attitudes and feelings of clients, preferably with standardized instruments | Structured and semistructured assessment of views of parents and teachers about clients; peer nominations of children in class especially liked; peer checking of names of classmates having specified traits | n.a. |
| Simulations (hypothetical problematic situations) | n.a. | Task of selecting several classmates to help plan a hypothetical class party is given to peers of client | Clients are asked what they could do when other children try to take their toys away |
| Graphics (use of pictures or models to express feelings) | An 8" circle is presented to client who is then asked to divide it into wedges to reflect importance of different roles s/he plays | Line drawings of faces with a smile, frown, or neutral expression are presented to peers of client along with names of students in class and peers are asked to mark the face showing their liking of each child | n.a. |
| Interviews (open-ended inquiries) | Semistructured or open interviews with client evaluated by blind judging as to feelings revealed | Semistructured or open interviews with teachers evaluated by blind judging as to feelings and attitudes toward client revealed | n.a. |
| Self-Reports (Descriptions by clients or significant others regarding their feelings and attitudes) | Diaries of feelings and attitudes, evaluated by blind judging | Diaries of feelings toward, or evaluations of client's behaviors evaluated by blind judging | Clients' records of their specific behaviors performed under specific circumstances which can be corroborated (e.g., completed homework assignments) |

Note: n.a. = not applicable

management of conflict, such as how to react when someone tries to take your toy away.

Data collected about the child's social knowledge through this approach would fit under the criterion of indices of competent functioning since they are analagous to test scores reflecting the number of right answers, or an increase in the number of right answers if pre- and post-tests are employed. In many ways, simulations of social situations as evaluation tools are comparable to mathematics problems in which a student is presented with a verbal problem, for example, concerning the winner when two cars are traveling at different rates from different starting points. The answer given depends upon the child's use of the knowledge s/he possesses.

### Graphics

The second new modality has not been given any label, yet numerous strategies of measurement could fall into this category. The name given to that cluster in this chapter is graphics. The general category could be called quasi-projective tests but this term is not being used because all of the approaches permit simple coding and have a clear rationale for which answers are considered right or desirable from the perspective of a practitioner in a school setting. Further, the students are generally asked to portray themselves and their feelings via pictures or icons, thus there is no intention to uncover unconscious aspects of the self. The merit of these techniques is that they require almost no words, either spoken or written, from the child being assessed and thus can be used with relatively non-verbal clients. However, the child must be capable of understanding that pictures and geometric figures can represent people if the procedure is to have validity. When the pupils being assessed are expressing their own feelings, data collected through this technique belong under the criterion of improved feelings and attitudes of clients. If peers are being asked their views about a client, this technique would fit under the criterion of improved views of significant others. Three graphic approaches will be described: the PIE, the SCAMIN, and the Family Systems Test.

The PIE. One type of graphic technique is the PIE which measures an individual's psychological commitment to the various roles s/he plays in life. The PIE was originally developed to assess a husband's and wife's feelings about the importance of their various roles as they go through the transition to parenthood (Cowan, 1988; Cowan et al., 1985). (The term PIE is not an acronym; it is used because the picture completed by the individual at the end of the procedure resembles a pie cut into different sized wedges.) Evidence of the PIE's validity emerged when Cowan and her colleagues examined their PIE data and discovered that the importance of the partner/lover role diminished significantly more for wives than husbands between the third trimester of pregnancy and six months after the birth of the baby; this discovery helped explain the often-noted drop in spouses' marital satisfaction during the transition to parenthood.

The PIE instructions call for giving the persons to be assessed a page with a circle 8" in diameter and asking them to list the main roles in their lives--friend, student, son, daughter, worker, ballplayer. The individuals are then asked to divide the PIE so that each section reflects the importance of each role to them, not necessarily the time spent in the role. The sections of the PIE are measured to determine the percentage of the circle allocated to each role. These scores are described as reflecting the psychological self. The PIE can be particularly useful to school social workers attempting to evaluate programs developed to increase the commitment to the student role of adolescents alienated from the educational system. If less able students are involved, pictures can be used to illustrate these roles, for example, a drawing of a family with parents and children, a classroom with students and a teacher, and a group of boys playing baseball.

By assessing the size of the wedge representing the student role before and after an intervention, the clinician will have a quantitative measure of how important school has become in the student's life. This is a critical issue because it was found in a recent study of inner city adolescents that the centrality of the student role was one of the key differentiating characteristics between youths officially labeled delinquent and those not so labeled (Oyserman, 1987). Further, concerning the latter group, one of the distinguishing characteristics of those who reported themselves as performing delinquent acts at times and those who did not was the importance of the student role to the adolescents.

The PIE should be administered simultaneously to a control group, that is, comparable students not offered this or any intervention, to be certain that the passage of time, per se, did not account for any changes observed. The importance of control groups was highlighted in the "Transitions to Parenthood" study. Couples who did not have a baby were used as a control group and these individuals did not show a dimunition in the wife's partner/lover wedge of the PIE over the period of the investigation (Cowan et al., 1985). In the paper "Assessing the Effectiveness of School Social Workers" (Radin, 1979), strategies for using control groups without denying service to anyone are described, for example, placing members of a control group on a waiting list and offering the service to them at a later time. Those approaches would be applicable here. Further information about the use of the PIE can be obtained by writing to Dr. Carolyn Pape Cowan, Research Psychologist, Department of Psychology, University of California, Berkeley, CA 94720.

SCAMIN: What Face Would You Wear?. The two other graphic modalities which assess the views of the clients will be briefly described. One called the SCAMIN (Self-Concept and Motivation Inventory: What Face Would You Wear?) has been used with very young children. It involves presenting the child with three simple line drawings of faces, one with the well-known smile, one with a straight line for a mouth, and a third with a downturned mouth (Farrah, Milchus, & Reitz, 1968). Children are asked to mark the face or mask that most resembles their feelings under different conditions, for example, when they think of how well they are doing in kindergarten. This simple instrument can be used even with preschoolers for it has been found in a study of empathy that children three to five can differentiate happy from sad feelings when presented with such line drawings (Borke, 1971). This tool would be particularly useful in assessing the effectiveness of interventions with depressed young children. More information about the SCAMIN can be obtained from Norman J. Milchus, 20504 Williamsburg Road, Dearborn Heights, MI 48127. Practitioners who wish to create their own drawings of the three faces to assess changes in children's affect can readily do so without using the SCAMIN's portrayals. Care must be taken, however, to use the same drawings in pre- and post-tests or the evaluation will not be valid.

The Family Systems Test. Another graphic tool, The Family Systems Test, or FAST (Feldman & Gehring, in press; Gehring & Wyler, 1986; Gehring & Feldman, 1988), was recently developed to assess the psychological closeness of youngsters 11 to 18 to members of their family, but it can be readily adapted to assess the feelings of closeness of clients to staff members in a school setting. As in the case of the PIE, this tool can be particularly helpful in determining the effectiveness of programs to reduce adolescents' estrangement from the educational system. Feelings of students toward teachers may be of critical importance because several studies have shown that there is an inverse relationship between closeness to instructors and dropping out of school and delinquency. For example, it was found that delinquents were less likely to view teachers as having been influential in their lives than non-delinquents (Oyserman, 1987). In addition, a study of Hispanic school dropouts in Michigan concluded that one of the major differences between Hispanic students who dropped out of school and those who did not was their comfort in talking with teachers (Flores, 1986). As a consequence, one of the strategies recommended in the report for reducing the dropout rate was staff development programs for teachers and support staff aimed at developing mentorship/tutorial relationships between school personnel and dropout-prone students.

In the FAST adolescents are given wooden figures representing family members and asked to place them on a board resembling a checker board in such a way as to depict how close family members feel to each other. In other words, the distance between the figures represents the psychological closeness the individual being assessed feels toward other family members and the way s/he perceives other family members to feel toward one another. The actual distances between figures created by the adolescents are readily measured. School social workers using this approach could present the adolescent with figures representing various members of the school staff and students with one of the figures representing the student being assessed. The smallest distance between the student's own figure on the board and any teacher would be the relevant measure and should be compared with the distance created on the same board by a control group of students not alienated from school, or by the distance obtained at the end of an intervention, for example, of the in-service training program recommended above to reduce the dropout rate for Hispanic students. The FAST also measures the relative power of the figures by giving the adolescents blocks of wood and permitting them to raise the height of the more powerful figures so that height of the figures corresponds to the power of each figure. Social workers seeking to increase the perceptions of efficacy among clients may wish to use such blocks in their work with the FAST. Further information about this test, the validity of which has been well established (Gehring & Feldman, 1988), is available from Professor S. Shirley Feldman, Family Studies Center, Margaret Jacks Hall, Building 460, Stanford University, Stanford, CA 94305.

## Supplement to the Criterion of Effectiveness of Views of Significant Others

The discussion to follow supplements the material presented in 1979 (Radin, 1979) concerning the criterion of improved views of significant others about clients. Virtually ignored in that publication was the use of peers as significant others in assessing worker effectiveness. In the past few years, the importance of competence with peers, or social competence as it is called, has burgeoned in child development literature. Although one could ask parents or teachers to express their views of a child's ability to get along with classmates, or ask the children themselves, it is clear that an important way to assess this characteristic is to obtain the views of the peers themselves if valid, reliable methods to do this are available; fortunately, such techniques have been developed. The importance of peer assessments should not be underestimated since children's judgments of their peers are based on many more hours of observation in many more situations than could readily be observed by an outside evaluator (Asher & Hymel, 1981). Two types of peer assessments were described by Asher and Hymel: one measures the attraction between individual members of a group, and the other measures behavioral competencies leading to peer acceptance.

### Attractiveness to Peers

As to the attraction issue, several types of sociometric measures have been developed, each of which is designed to measure how well children are liked or disliked by their peers. Two of the major methods are nominations and rating scales. According to Asher and Hymel (1981) both approaches offer a valid and reliable index of children's effectiveness with peers.

Peer Nominations. The peer nomination method, a form of questionnaire, asks children to nominate a certain number of classmates according to specified characteristics--for example, best friend, or those especially liked. Typically only positive sociometric criteria, such as those just cited, are used but in some instances negative sociometric criteria, such as, "name three classmates you don't like very much," are employed. In both cases, the child's score is the total number of nominations received from peers. It has been found in several studies that nomination scores tend to be stable over time for elementary school children, and are almost as stable as achievement test scores (Asher & Hymel, 1981).

Rating Scales. The rating scale approach to interpersonal attraction among peers involves providing the children with a list of all of their classmates and asking them to rate each one according to specific criteria. For example, in studies conducted with elementary school children by Asher (Hymel & Asher, 1977; Singleton & Asher, 1977), children were asked to circle a number from 1 to 5 that best described how much they liked to play with or work with each classmate at school. A high rating indicated "like a lot" and a low rating indicated "don't like to." Faces ranging from a frown to a smile accompany the scale to help the children understand the meaning of the numbers. (This is an example of the use of graphics in a rating scale.) A child's score is the average rating received from all classmates.

The rating scale approach has been found to be sensitive to subtle changes in the question posed. For example, it was found that training low-accepted children in social skills (via a play situation) led to significant increases in the children's rating by peers in response to a question about like to "play with," but not in response to a sociometric question about like to "work with" (Oden & Asher, 1977). One important advantage of the rating scale over the nomination procedure to tap attractiveness to peers is that ratings of all children in the class are obtained, not just the few nominated. In addition, the test-retest reliability of the rating scale scores is higher than nomination scores, particularly when used with preschoolers. With these children a three point scale was used and three faces were used to help the children remember each point on the scale, one happy, one neutral, and one sad (Asher, Singleton, Tinsley, & Hymel, 1979).

## Peer Assessment

As to peer assessments of specific behaviors (not measures of how well liked a child is), the technique most useful to school social workers is that of the structured peer-assessment method called the "Guess Who?" technique. The approach uses a questionnaire format and has been employed with children from preschool age to adolescence (Asher & Hymel, 1981). Guess Who? has been found to correlate both with teacher ratings of the children's behavior (Gottlieb, Semmel, & Veldman, 1978), and with direct observations of children's behavior (Winder & Wiggins, 1964). As most recently used, children are presented with a matrix or checkerboard with specific items to be rated on the top and the list of peers along the side. The children are asked to check those items that describe each classmate. The score for each child is the number of nominations received on each behavioral dimension. Through the use of this approach it was found (Gottlieb et al., 1978) that educably mentally impaired (EMI) children were rejected by their peers in mainstreamed classrooms because of their behavior and not because of their academic difficulties. The behaviors to be rated included various forms of disruptive behaviors (for example, "Who is always bothering other children?"), and various items reflective of lack of cognitive competence, (for example, "Who never knows the answers in class?"). It was the former behaviors that were associated with rejected mildly mentally impaired children, not the latter. If an intervention were developed to alter those views or the behavior of the EMI children, one good way to assess its effectiveness would be to administer the Guess Who? scale as a pre- and post-measure. For further information about peer assessment, contact Dr. Steven R. Asher, Bureau of Educational Research, The University of Illinois, Champaign, IL 61820.

It is evident that school social workers attempting to improve the social competence of clients should consider the views of the children's peers as one of the criteria of the effectiveness of their interventions. However, because of the time and effort needed to collect peer ratings from all of the children in a class and to analyze the data ratings from all of the children in a class and to analyze the data collected, practitioners should consider focusing on social skill interventions within one classroom and selecting a control group from that same room. In this way, information about all of the children served and all of those in a control group not served or offered an alternative treatment can be collected simultaneously.

## An Application of the Revised Evaluation Paradigm

To illustrate the use of the updated evaluation model, a proposal for funds to reduce aggression in the school yard by upper elementary school children will be discussed. The specific intervention will train students perceived by others to be leaders to serve as conflict managers who will attempt to mediate disputes on the school playground before they escalate. Peer ratings will be used as part of the evaluation, specifically Guess Who? with items pertaining to aggressive acts included. The instrument will be administered in all of the target grades, both before the program begins and three months after it ends. An indication of effectiveness would be a reduction in the number of children associated with various forms of aggressive behavior. Using this approach, the school social worker is employing the criterion of views of significant others (peers) and the modality of questionnaires.

In addition, the modality of simulation techniques will be used where children previously reported for fighting or aggressive behavior are asked, before the intervention and three months afterward, how they could respond in specified provocative situations. Here evidence of success would be an increase in the number of non-aggressive strategies cited, an index of competent social functioning. Other indices of competent social functioning that may be employed in an evaluation of the project were discussed in the Radin (1979) publication. These include systematic observations of peer interactions on the playground before and after the intervention and the collection of relevant hard data (specifically, the rate of suspensions or reports to the principal's office for aggressive acts on the playground before and after the intervention).

As can be seen from the above discussion, evaluation of the effectiveness of the intervention plan does not consist of tallying how many hours were spent training student conflict managers, or of how satisfied their teachers or parents were with the program. The ultimate test of success is whether or not aggression was reduced because that was the stated goal of the intervention.

In conclusion, if the bottom line for business is "How much of a profit was made?", social workers in school settings must accept the fact that the bottom line for them is "Did your effort make a difference?" The theme underlying this chapter is that when practitioners have more evaluation strategies at their command, there is a greater likelihood that their answer will be "Yes." Three relatively new and powerful techniques, not previously described together elsewhere, are readily available to clinicians in educational settings: simulations, graphics, and peer assessment. Each taps a unique approach to evaluation not duplicated in other assessment strategies. These methodologies should not be overlooked--to do so could mean losing an opportunity not provided by any other avenue to demonstrate that school social workers' interventions do indeed make a difference.

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# HUMAN SUBJECTS GUIDELINES FOR SCHOOL-BASED RESEARCH

Ruth Ratliff

ABSTRACT: Although school-based research rarely poses physical risks to students, it may involve complex ethical questions. This chapter discusses measures that should be taken to safeguard the welfare of students and clients participating in such projects. It particularly examines the following: selection of subjects; conditions of subjects' participation; project methods; the recording and reporting of data; and obtaining informed consent.

## Human Subjects Regulations

Researchers in medical, social, and behavioral sciences and the agencies that fund their work have displayed over the past fifteen years an increasing concern for the protection of human research subjects. It has become common for colleges and universities, schools, school districts, and hospitals to establish boards (called "institutional review boards" or IRBs) that review all proposed research involving human subjects to be conducted on their premises. Researchers and reviewers are guided by suggestions of professional associations, such as the American Psychological Association (1973) and by federal regulations proceeding primarily from the U.S. Department of Health and Human Services Office for Protection from Research Risks (OPRR). While these rules technically govern only that research supported with federal funds, they generally have been accepted by research institutions as standards of good practice. Human subjects issues, however, often fall into gray areas where these rules may be open to differing interpretions. There may not be definitive answers for the researcher or the board. A human subjects review is often a process of negotiation between researcher and IRB.

The Belmont Report, published by The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1978) is an excellent introduction to human subjects concerns. Written in clear, non-technical language, it discusses the ethical principles governing research involving human subjects and forms the basis for federal human subjects regulations. The Belmont Report articulates three ethical principles that should govern the involvement of human subjects: (1) respect for the autonomy of subjects; (2) beneficence, the effort to secure the well-being of subjects; and (3) justice, expressed by refraining from imposing undue burdens on subjects or denying them benefits to which they are entitled. These principles point to matters such as the obtaining of participant consent, the confidentiality of data, the selection of subjects, and the psychological or physical risks involved for the participants, which must be considered in many research projects.

OPRR regulations (found in Title 45 of the Code of Federal Regulations) define research as "a systematic investigation designed to develop or contribute to generalizable knowledge" (45 C.F.R. Sec. 46.102). By this standard, an evaluation that is conducted solely for the purpose of improving that program is not considered "research" and is not subject to review; nor would a counselor's client treatment notes taken solely to improve the counselor's own practice fall into the category of research. A human subject is defined as "a living individual about whom an investigator conducting research obtains 1) data through intervention or interaction with the individual or 2) identifiable private information" (45 C.F.R. Sec. 46.102). Thus, research projects obtaining data that cannot be linked (even by the researcher) to the individual identities of subjects are considered exempt from human subjects regulations. However, even program review projects or anonymous survey and observational research may be required by the sponsoring institution to be submitted to its review board. While educational research projects usually are not as "risky" as medical, they can be ethically complex when they involve examination of student (and sometimes parent) behavior, use of information about students that may be considered "private," or the participation of minors in research. The following are some aspects of research projects that commonly come under the scrutiny of review boards.

## Common Human Subjects Issues

### Selection of Subjects

It is not considered ethical to ask people to participate in research when their physical or emotional conditions would make that participation especially onerous for them--even if the study will result in benefits to others suffering the same conditions. Persons being asked to participate in research have the right to know why they have been chosen for the project. They should also be informed if another person or agency has given you their names. This is especially important in research involving requests for confidential or potentially embarrassing information, even if this information is to be given anonymously. For example, in conducting an anonymous survey on drug use among a random sample of students, it would be very important to inform the students and their parents that their names were selected at random from a particular list.

### Conditions of Subjects' Participation

The careful researcher will attempt to assure that the persons requested to participate in research do not feel unduly obliged to do so. This can be particularly a problem when you, the researcher, are also providing some sort of service to the subjects, for you are potentially in the position to award or withhold benefits to these clients, depending upon their participation. In such cases, you should carefully explain that they are free to choose to participate and will not be denied your services if they decline. Clients will feel more free to decide if you have constructed you study so that you, the researcher and counselor, cannot identity their responses, and most free if you cannot even tell which of your clients chooses not to participate.

Research subjects have the right to know that they may also withdraw from the research project at any time. If you are conducting research using the practices you normally use (and that are commonly accepted in your profession), your clients should be informed that they can request at any time that the data you are gathering from them be excluded from your study. When your subjects are students participating in "normal" educational activities, you should inform their parents that they may make a similar request. If the services are themselves "experimental," (that is, their efficacy is doubtful and their use may even be risky) tell your clients that they are free to withdraw from participation in the research at any time and that you will continue to serve them through more traditional practice. If there exists the possibility that your subjects may be harmed by participation in your project, you must make provision for remedy. For example, if your project has the potential to cause serious emotional distress for your clients, you must be prepared to provide free, professional counseling for them.

## Methods of the Study

Two questions lie at the heart of concern for the welfare of human research subjects: "Are the project's proposed activities physically or psychological risky?" and "Are the benefits to the participants (or to others like them) potentially so great that they outweigh the risks?" Of course, research often involves persons who are at risk of physical or psychological harm; what a review board will examine is the extent to which their participation in a research project either alleviates or exacerbates that risk.

Whether it is right to ask a subject to undergo risks in a project when its benefits will not be realized by the subject but by others (a situation existing most obviously in medical research but possible in behavioral) is a thorny issue over which researchers and reviewers wrangle. The federal regulations require that particular concern be given to this issue when the research subjects are children (45 C.F.R. Sec. 46.406). More common in educational and counseling research is the matter of assessing whether an experimental intervention or strategy is so likely effective that to deprive some clients of it is unjustified by the need for more extensive verification; or conversely, whether the strategy is probably so ineffective that exposing clients to it cannot be justified.

It is commonly accepted that research involving students participating in "normal" educational activities presents minimal risk; however, whether a project's activities are "normal" may be problematic. The federal regulations give these definitions of "normal educational practices": "1) research on regular or special education and instructional strategies; or 2) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods" (45 C.F.R. Sec. 46.101). Research involving the use of educational tests, surveys, interviews, or observation may also be construed to be essentially riskless in most cases. There is risk, however, when the information the tests obtain is recorded in such a manner that the participants can be identified with it, either by name or other identifying characteristics. This risk is intensified when any disclosure of the responses might embarrass or damage the subjects. In fact, no matter how innocuous your methods appear to you, it is wise not to assume that your project is "riskless" and therefore not subject to review by your institutional review board.

Perhaps the most controversial practice in social or behavioral research is that of deception--of deliberately misinforming the participant or withholding information that would be likely to affect his or her actions in participation. Some ethicists feel that deception in the course of research is never justified while many social and behavioral scientists claim that it is an essential tool of their research. A common compromise is to allow "benign" deception; requiring that the subjects be disabused of the deception after the research has been completed. "Benign" deception excludes that which (1) would make a person feel foolish or "duped" when disabused, or (2) might cause the person to act in way that he or she will likely regret. Researchers working with children must also consider what effect deception--and the revealing of deception--may have on their moral development. In some cases, these concerns may justify unrevealed deception if it is innocuous. However, review boards will probably be more inclined to reject deception as an acceptable research practice with children.

## Recording and Reporting Data

It could also be considered a form of deception to breach the assumed confidentiality of an interaction between researcher and subjects by recording and reporting private information. According to federal regulations, "private" information includes behavior that a person can reasonably expect is not being observed or recorded. Data that a person provides for one purpose may not be used for another without that person's consent (45 C.F.R. Sec. 46.102). You should be able to tell your clients how the information that you record will be recorded, how it will be reported, and who will see it. They must give their consent to being tape- or video-recorded. (It is considered good practice to erase such tapes when the study is completed. If you do not plan to do so, inform your clients for what other purposes you will use the tapes.) If the information you are seeking involves description of illegal activities, you will want to be very careful in recording it, for your client's sake as well as your own. It is safest to record such data with no identifiers at all. As a researcher in the schools, you may also be confronted with a conflict between your obligation to protect the confidentiality of information obtained from a student against a parent's desire to know his or her child's responses. Again, recording data with no identifiers can resolve the problem. By contrast, in public settings a researcher may record the behavior of subjects without their consent. A classroom is generally considered a public setting, yet the students may not expect certain types of disclosure of their behavior. Reporting sample comments given in class might thus be quite acceptable, while publishing these same comments linked with the names of students who made them could be regarded as a breach of confidence.

An institutional review board will not only consider how you record your data, but also whether all the data you request is really necessary to your study. To ask for personal information that is not necessary is not only bad practice but may also discourage participants from responding fully to other questions. Consider also that reporting certain data may identify the small groups to which your clients belong--such as homeroom, class section, grade, or school--and thus make them feel uncomfortable even though their individual identities are not revealed. In a very small or a homogeneous population, reporting certain demographic characteristics, especially in combination (such as religion and parents' professions), can virtually identify a student.

## Obtaining Informed Consent

Before involving persons in a research project, you must give them sufficient information about the research so that they can decide whether or not to participate. This should be presented in language that the client or student (or the student's parent) can understand. Just how much information this oral or written presentation must include may be a matter for debate with the review board. Usually the statement will include the following: the purpose of the research; the reason for selecting the person as a subject; what participation in the study will involve; the potential benefits of the project to its participants or to others; the risks or potential discomfort (including emotional discomfort) that the participant may experience; and the degree to which the participant's identity will be protected. Potential participants should also be explicitly informed of the conditions of their participation (see previous section). In sum, they should be told that: (1) they may freely choose whether or not to participate, (2) they will not be penalized (or lose the benefit of services) if they choose not to participate; (3) they may withdraw from the research without withdrawing from the services at any time.

In only a few circumstances, subjects need not be informed of the research or their participation in it. The most common instance in school-based research involves research on "normal educational practices" in which the published results cannot be linked to individual students. An educational research project that uses school records shorn of identifiers at the time the researcher examines them might not require consent. A third instance might be observational research, in a public setting, where informing the students would influence their behavior. In conducting projects in the schools, however, it is wise to keep parents informed of proposed research. Their consent to involve their children should be sought for any research activities departing from the regular curriculum.

Even though persons should almost always be *informed* about the research, their written consent to participate in it may not always be required. It may be desirable to forego written consent when the subject's signature would be the only identifier linking him or her to responses--or to the project at all (e.g., the case of a questionnaire that could be returned anonymously).

Obtaining consent for projects involving children is somewhat complicated by the fact that in many states persons under eighteen are not legally qualified to give consent. To involve a minor in a project requiring consent, you must obtain consent in writing from the student's parent or legal guardian. (In a "risky" project, a review board may require that the consent of both parents be obtained (45 C.F.R. Sec. 46.408)). It is required that an advocate be appointed for a ward of the state to give consent for that student to participate in a research project (45 C.F.R. Sec. 46.409). Some schools employ "negative consent" and inform parents that, unless they object, their children will be involved in research. This is not considered good practice. A more acceptable variation is the "blanket consent" to involve students in normal education research over the course of a year; but even this "blanket" does not cover all projects. Those that involve departures from regular classroom activity must still seek special consent from parents. It is also good practice to give the student, if over seven years old, the opportunity to assent to or refrain from participating in projects that involve activities other than those regularly scheduled.

## Summary

Submitting a project for institutional review may appear an onerous procedure requiring you, the researcher, to address unlikely possibilities and delaying the start of the project. However, constructing a project so that it protects the welfare of subjects can improve its validity. Students who do not feel threatened by the activities of a research project will be likely to participate more fully and to give honest responses. Their parents, feeling well-informed about the project, will be less likely to object to their children's participation. Therefore, protecting the subjects of research also assists the researcher.

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# SECTION TWO

# METHODS OF SOCIAL WORK RESEARCH

# INTERRUPTED TIME SERIES DESIGN AND THE EVALUATION OF SCHOOL PRACTICE*

Paula Meares**

ABSTRACT: If their attempts to assess the effectiveness of social work intervention are to be successful, evaluators must understand the characteristics of the various research techniques. The author analyzes the strengths and weaknesses of the interrupted time series design, with particular reference to practice in public schools.

This article will describe some of the methodological strengths and weaknesses of the interrupted time series design, which is a technique that holds significance for the evaluation of social work in public schools. The literature on school practice has recognized the complexities of the educational system and has noted that this complexity must be conceptualized to foster fundamental knowledge of how to deliver school social work services.[1] During the past few years some authors have addressed this issue by explicating various social work methods and models in relation to school practice and identifying factors that shape such practice on the local, state, and national levels.[2]

However, it seems that during this time little attention has been given to systems of evaluating the effectiveness of social work intervention in the schools. It is this author's position that several factors have interacted to cloud the need for evaluation. Such factors include (1) the nature and complexities of the school environment, (2) the lack of knowledge and expertise in the skills required to implement the evaluation process, (3) the lack of control or input in determining the tasks appropriate to school social work, and (4) the reluctance of

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**Now Paula Allen-Meares

school social workers to experiment with new approaches to practice because of domination by the limiting individualistic approach, which offers them little opportunity to engage in self-evaluation or intervention assessment.[3]

As school social workers attempt to solidify their positions and to quantify and evaluate their contributions to the educational process, research techniques, designs, and statistical analysis will be of paramount importance. No longer should the delivery of social work services arise spontaneously out of the demands of the school system without attention to systematic assessment of the impact or effectiveness of the services. The current literature is beginning to address this issue and is establishing some guidelines that not only hold significant implications for the future but indirectly support the move toward specialization that is currently claiming the profession's attention. For example, a recent article by Radin and another by Michals, Cournoyer, and Pinner attempt to develop evaluation research techniques, data collection devices, and designs based on the unique environmental considerations and structural conditions that affect practice within public schools.[4]

These developments are timely in light of the inflationary demands, budget cuts, and increasing societal pressures placed upon the schools. It is important that school practitioners provide data reflecting their contribution to the educational process. They must not only become more cognizant of how the goals of social work mesh with educational goals and objectives but must demonstrate their contribution to the process--and evaluation research will provide social workers and the school system with quantitative data on the effectiveness of service.

The author strongly recommends that the evaluation of social work practice in schools become a part of the daily operation or routine of the practitioner or groups of practitioners. It is critical that the school enhance and maintain its position as a pivotal institution within the network of child welfare services. In their efforts to demonstrate their effectiveness as it relates to educational goals, school social workers must meet several criteria: they must (1) be systematic, (2) provide a quantitative presentation of data and related results, (3) provide an objective analysis of results, and (4) incorporate evaluation as a part of every function at several levels, including the levels of the individual, group, community, and organization.

### General Problems in Evaluation

Practitioners must also be careful to avoid the pitfalls of evaluation research that have too frequently led social workers in a variety of settings to underestimate the significance of their contributions. Among these traditional problems related to evaluation research in general are the following.

1. Generally, those studies within social work that have attempted to assess the impact or effectiveness of a specific intervention "have yielded disappointing and confusing results."[5] At the same time, there is increasing pressure on social service agencies and on institutions hosting such services to evaluate their programs. The evaluation of social services has generally raised more questions than it has answered. Thus, the "realistic fear that evaluation research will fail to document any positive effects of services on clients has resulted in a prevailing ambivalence toward evaluation among practitioners."[6] Fear of the results of evaluation has contributed to the practitioner's reluctance to utilize the techniques.

2. An evaluation study may be deceptive because of a mismatch between the definition of success and the method of assessing and statistically analyzing the outcome.[7] Practitioners often define success in one way and measure it as though it had been defined in another way. A mismatch between the definition of success and the method of assessment leads to failure to find statistically significant relationships when they indeed exist. For example, an evaluation technique to assess cure or restoration may not detect successful amelioration, prevention, maintenance, or pattern change. Another way of explaining this error is to say that the results of practice have been incorrectly interpreted and reported when in fact the social work intervention has had significant impact.

3. Practitioners too often identify cure as the desired outcome of intervention. They assume that there is some causal agent or condition that must be removed or deactivated. It is virtually impossible to

assume that intervention will result in cure, given (1) the lack of experimental control within the majority of social work settings and (2) the significant number of variables that impinge, with varying degrees of impact, on clients.

4. Researchers in the area of social work often rely unnecessarily upon sophisticated statistical analysis when they could use a graphic representation such as that used by Michals, Cournoyer, and Pinner in the recent study in the East Hartford, Connecticut, schools.[8] In that study, the statistical analysis of the data involved an inspection of the change in behaviors over time rather than calculating the mean frequency of the behaviors under analysis (attendance patterns, tardiness patterns, and grading patterns). When the data were inspected using regression lines, and when the pattern of behaviors was analyzed (a departure from the procedure of calculating the means before and after intervention), the outcome was positive. This illustrates the need for social workers to experiment with different approaches to analyzing data before reporting that the intervention is a failure. The author is not proposing that this design be limited to merely the inspection of changes in patterns of behaviors. There are specific statistical procedures for analyzing data yielded by this design that are more complicated than the procedure utilized in the East Hartford study.

5. Another major component in the evaluation process that is frequently not sufficiently conceptualized in social work is the nature of the intervention itself. As Gambrill has pointed out, "in order to improve our own practice and to contribute to the development of social work knowledge, we must analyze not only whether a particular strategy resulted in client change but also why it does or does not. We must evaluate both outcome and process."[9]

6. Last and not least among these problems is the failure to include theory as a part of the evaluation plan. Proch contends that "one of the most important elements in producing a useful evaluation is locating the study in a theoretical perspective" and that there has to be some reason or theoretical justification for a program if it is to succeed.[10] Another essential element related to this issue is replication, a procedure that is now a relative rarity in evaluation research.

It is vital that researchers conduct repeated investigation if they expect to inspire confidence in the validity of evaluation results for repetition of results is the basis of scientific generalization.

### Interrupted Time Series Design

In the interrupted time series design, a series of measurements of the variables to be influenced are taken before and after the introduction of the treatment or intervention strategy. The intervals between measurements must be consistent and specific, and the more measurements made the better. This design can be diagramed as follows, with "M" representing a point of measurement and "T" the period of treatment.[11]

| Premeasurement | Intervention | Postmeasurement |
|---|---|---|
| M1________M2________ | M3______T______M4____ | M5________________M6 |

Methodological Strengths. One general advantage of this design is that it does not require a highly controlled setting. Among the specific qualities that contribute to the appropriateness of this design for evaluating social work intervention in the schools are the following:

1. The greatest advantage of the interrupted time series design is, according to Popham, "not that it offers an alternative to traditional comparative designs, but that it provides a markedly different perspective for evaluating the effects of social work intervention."[12] As Popham also indicates, many types of treatment used by school social workers produce their effect over a period of time and not in a single instant as measured by a posttest. Because this design is ideal for studying longitudinal effects, it is more appropriate for use when long-term benefits are likely to be the result of intervention.

2. Another advantage of the interrupted time series design is that it provides a posttreatment tool to use in evaluating social work interventions for which no comparison-group contrasts were planned. It lends itself to spontaneity. In other words, "the intervention can be implemented and evaluated as a second thought; because school attendance records and grades can provide baseline data."[13] A profile of preintervention characteristics should be analyzed, understood, and quantified before the intervention is introduced or conceptualized.

3. This design can also be used when it is impossible, for ethical or other reasons, to withhold a given treatment. The use of control groups within the context of the school is generally impossible to arrange, since all children needing social services must receive them, and under no circumstances should students be denied access to treatment. According to Campbell, when a control group cannot be used, the interrupted time series design can be strengthened if comparison-group data are available, and this design ranks as the strongest of all quasi-experimental techniques under these conditions.[14]

4. As stated earlier, certain types of results are difficult to interpret using the interrupted time series design, but when data are presented graphically, interpretation is less difficult. This is significant in that it may enable practitioners to analyze data without possessing sophisticated statistical knowledge and skills.

Thus, a number of positive qualities are related to this design. And these qualities complement various ethical and environmental limitations confronting school social workers.

Methodological Weaknesses. Several limitations and considerations must be addressed when utilizing the interrupted time series design. The following are among these areas of potential weakness.

1. The design does not control for history as a factor in producing the change in the pattern of behavior. The plausibility of history as an explanation for a shift in behavior depends upon the degree of experimental isolation that the experimenter can claim.[15] Extraneous events as a part of history may interact with the intervention strategy and thus pose one of the most serious threats to internal validity, particularly in situations of open service when the client is constantly in contact with the natural environment.[16] Also, time intervals must be exact, to ensure that a change is not taking place as a result of a factor such as a historical or seasonal trend.

2. The reliability of baseline data is subject to question if the data are archival or have been collected by any person other than the evaluator. As noted earlier, this design allows for the insertion and use of already existing records in developing preintervention measurements. The total acceptance of such records throws suspicion on the

outcome measures. Grades, attendance records, and testing scores are generally sources of errors. They contain subjective opinion and do not provide totally accurate information on baseline behaviors. "To develop valid baseline data and outcome measures, the content of this measurement device must reflect the goals or desires of the services being evaluated."[17]

The following questions should be posed by the evaluator in relation to this issue: (1) Do the measurement procedures actually reflect the status of the clients on some important characteristics subsequent to intervention? and (2) If the researcher relies upon baseline data collected by others without developing his or her own premeasurement, is the outcome subject to debate? School records should not be ignored but should be used in conjunction with preevaluation instruments that have been developed in light of the goals and objectives within the framework of the intervention strategy. "Assessment variability is a concern when multiple evaluators are used in the assessment process and error may be introduced."[18]

Another part of this issue is the problem of limiting a long series of observations to indicators that are already being recorded for other purposes. Such indicators may not be completely relevant to the major thrust of the intervention. According to Campbell, what is generally lacking in data from interrupted time series designs are reports on the participant's experiences and perceptions: "Present school records provide only one opinion on how a student is progressing, but seldom, if ever, do such records provide the pupil's perception or report on how the school is doing. Both participants should be allowed to provide feedback."[19]

The use of multibased data (including self-reports of persons directly and indirectly involved in the process) is important in evaluative research. In social work, the outcomes in which researchers are interested are often too complex to be measured by means of a single criterion.

> It is recommended that several criteria must be combined to measure a single concept. Also because of the complexity of variables currently studied by social and behavioral scientists, there is an increasing need to use multiple methods of

> data collection techniques. Having a variety of methods that combine both highly quantitative and qualitative data collection techniques may also help to provide information for a more complex picture of the operation of particular variables.[20]

Another factor that could affect this issue is the variation among professionals such as teachers and social workers in their viewing of behaviors and recording of information. A change in a trend line or behavior pattern may be the result of variations in the approaches of those observing the behavior or in the quality of recording.

3. Tests of significance in interrupted time sequence designs are still a problem and are "under development." For example, according to Campbell, ordinary least-squares estimations are usually inapplicable because of autoregressive error.[21] Statistical techniques are currently being developed and refined by researchers.[22]

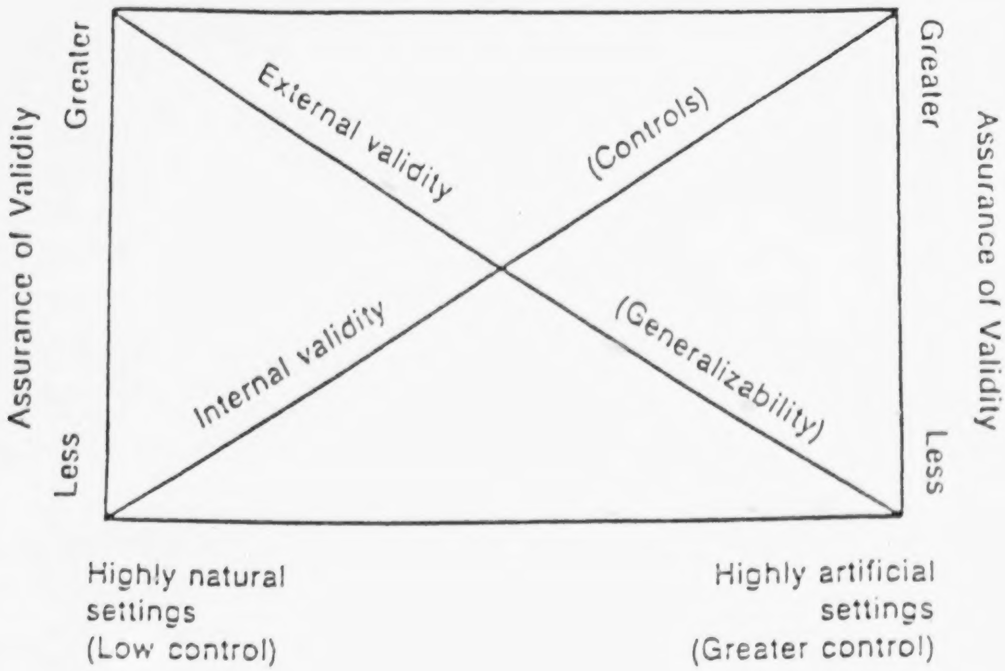
## Conclusions

The main purpose of this article has been to examine one quasi-experimental design that holds a number of positive implications for the evaluation of social work practice and intervention in public schools. One of the issues raised was that the evaluator must know the "trade-offs" in selecting any particular evaluative design. This requires some degree of sophistication and a knowledge of the various options and environmental aspects that limit or enhance various aspects of the evaluation process. As Moursund has stated:

> You must know the limitations of the design--i.e., what kinds of information will it yield? What kind of information will be omitted in the process? Why? And what will be the degree of generalizability . . . if a quasi-experimental design has been selected? The question of internal validity is a simple one--although the answer certainly is not. Did the treatment cause the change in observed behavior or is there another plausible explanation? The design of a study should attempt to eliminate or control as many of the internal sources of error as possible to reduce the possibility of rival hypotheses.[23]

Often, as the evaluator's control over "the research setting increases, the internal validity of the study (achieved through experimental control) tends to increase as external validity (generalizability) decreases."[24] True experimental control in a public school setting

FIGURE 1. POSSIBLE EFFECTS OF ARTIFICIALITY OF SETTINGS ON VALIDITY*


Assurance of Validity
Greater
Less
External validity
(Controls)
Internal validity
(Generalizability)
Greater
Less
Assurance of Validity
Highly natural settings (Low control)
Highly artificial settings (Greater control)

| | | | |
|---|---|---|---|
| Unstructured field observation | Structured interviews and questionnaires | Natural and field experiments | Laboratory experiments |

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* Source: R.O. Washington, *Program Evaluation in the Human Services*, Center for Advance Studies Monograph No. 1 (Milwaukee: University of Wisconsin, 1975), p. 24.

is probably not feasible unless the school has been designated as an experimental or laboratory setting. Still, there are problems in generalizing even if the school is experimental in nature. Figure 1 provides an explanation of these issues--external and internal validity as related to a natural setting (public schools) or a laboratory setting.

The interrupted time series design is a promising evaluation tool because of its flexibility and compatibility as it relates to natural settings and the problems confronted by social workers in schools. However, it needs further experimentation, application, and development.

## Recommendations

Researchers must attempt to replicate and simultaneously explicate studies based on the interrupted time series design. To fulfill this charge, social work educators and social work practitioners interested in this specialization must collaborate and share their unique expertise as it relates to the evaluation process. Some of the issues set forth in this article may raise doubts among practitioners in terms of knowledge and skills required to carry the process out.

But evaluation technology is not solely the property of academicians. It is the author's position in this article that the academician and the practitioner--one being more familiar with practice considerations related to implementing an evaluation process, and the other being more knowledgeable on technical aspects of design utility, appropriateness, and limitation--must recognize their interdependence. If school social workers are to build evaluation research techniques and develop a body of knowledge specific in their field of practice, these two levels of expertise must be bridged.

Also, the implementation or development of an intervention strategy should be based upon an assessment of needs within the school-community-pupil configuration. Social workers should establish that a given intervention is relevant, consistent, and needed before they define the various components of the intervention plan and the evaluation process.

## ABOUT THE AUTHOR

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# Single-case study designs revisited

**Eileen D. Gambrill and Richard P. Barth**

**Although considered by some writers to be one way of integrating research and practice, single-case study designs have recently been criticized for failing to facilitate research and practice goals. The authors offer a perspective in which knowledge-building efforts are seen along a continuum ranging from exploratory to causal and indicate that such a perspective leads to a more optimistic view of the usefulness of various single-case designs. They suggest that a practice model including such elements as a clear definition of desired outcomes, the collection of baseline information, and the tracking of progress during intervention is compatible with a variety of single-case study designs.**

Research and service, or direct practice, have had an ambivalent relationship throughout the history of casework. Although social workers are generally encouraged to draw on the findings of empirical research in their work with clients and to add to social work's knowledge base by gathering data within their own practice, both of these activities are often neglected. The variety of reasons accounting for this have been discussed elsewhere.[1]

Within the last few years, the use of single-case study designs has been proposed as a way to improve the knowedge base of social work. Whereas earlier articles were perhaps overly optimistic about the ease of applying single-case study designs in practice, a recent article by Thomas presents an overly pessimistic view by singling out for discussion the most rigorous single-case designs and emphasizing one goal for their use.[2] The purpose of the present article is to suggest an alternative perspective regarding the role of single-case studies in research and service.

## CONTINUUM OF EFFORTS

The authors' basic premise is that research designs lie on a continuum ranging from designs that are exploratory in nature and offer tentative data concerning the impact of a given intervention to intensive single-case study designs that permit the researcher to draw inferences about the causal effects of interventions.[3] The accumulation of evidence about the effects of a given intevention is generally carried out in a gradual fashion. Early research efforts are often exploratory in nature, with later efforts being designed in accordance with what is found in these early activities. An important point of departure from the position Thomas has assumed is the acceptance of the usefulness of designs all along this continuum. Acceptance of the continuum calls for a more optimistic view of the

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extent to which considerations regarding service and research are compatible. The authors view what are considered by many to be conflicts between research and service as conflicts among different models of practice.

In the authors' opinion, the collection of information within designs that do not permit causal inference does not necessarily interfere with practice considerations and in most cases facilitates these considerations. This point of view has been advocated by others who have discussed the relationship between research and practice.[4] Restricting activities to single-case study designs that are rigorous and intensive overlooks important contributions to the development of knowledge that social workers can make within less rigorous designs.

## RESEARCH AND PRACTICE OBJECTIVES

Thomas has stated that "the purpose of research with single-subject designs is to demonstrate that an intervention provides experimental control over a given target behavior," whereas the focus of service "is on the service outcome, on changes in the targets of intervention, rather than on demonstrating that the independent variables comprising the intervention . . . were in fact responsible for change."[5] Acceptance of a research continuum and research efforts as confirming findings rather than demonstrating effects helps to reconcile the objectives of research and practice. Cook and Campbell have pointed out that there are many possible conceptions of causality and that

> observed causal relationships in the social sciences will be fallible rather than inevitable and that the connections between antecedents and consequences will be probabilistic.[6]

If the goal of research is conceived of as the exploration of probabilistic causal connections, its achievement need not be threatened by the use of a range of single-subject designs.

No single-case experimental study, no matter how well controlled, can demonstrate that an intervention will always have a given effect on selected dependent variables. Replication is necessary to increase confidence in a study's original findings, and follow-up data are required to determine the longevity of effects. The AB design, consisting of baseline followed by intervention phase and often used in the context of practice, provides a weak basis for believing that a given intervention was responsible for observed changes.[7]

However, replication across different clients or occasions decreases vulnerability to some types of confounding effects. For example, successful repetition of an AB design using the same intervention across different clients with similar problems (such as parent training with abusive parents) can provide information on the generality of findings. Although such replications do not resolve questions about the role of specific components of intervention—for instance, positive expectations—these questions can be explored later in a context in which research is given a priority equal to or greater than service.[8] The point is that data gathered in settings in which considerations related to service are paramount can help point the way toward useful investigations within a more rigorous framework.

## CLINICAL APPLICATIONS

As noted by Thomas, service considerations may sometimes require the use of a single-case study design to confirm that an intervention was responsible for a particular change. This is illustrated by a case described by Gardner that involved a 10-year-old girl who was having seizures.[9] Extensive physical examinations failed to discover any physical cause for the seizures. However, an examination of how the girl's family interacted revealed that she and her younger sister competed for their parents' attention and that some events had taken place that could have provided her with models of seizurelike behavior.

Intervention consisted of the parents' ignoring the seizures or other deviant behavior and offering attention whenever the child behaved appropriately. Subsequently, the rate of seizures and tantrums decreased during intervention. Since the results of neurological tests are not always definitive, a reversal design (ABAB), in which baseline conditions are reinstated during the second A phase, was used to provide some confirmation that parental attention was related to the seizurelike behavior. Seizures increased during the second A phase; when intervention was again instituted, they decreased to zero. A follow-up one year later indicated that no further seizures had occurred.

In this example, a reversal design offering a greater degree of information about the role of intervention, the independent variable, in creating observed changes was used for purposes of case management. Although a short-term adverse effect may occur when baseline conditions are reinstated, maintenance of treatment effects may be increased by providing graphic evidence of the impact of an intervention.

Another example of the clinical value of reversal designs is provided by the use of an ABCDCD design in a community mental health center by Liberman and his associates.[10] Institution of the initial C phase (in which the client received coupons for time away from the clinic) resulted in only a modest improvement in the client's behavior, whereas institution of the D phase (adding response cost to the coupon system) was followed by dramatic improvement. Although it might appear that the goal was accomplished at this point and that the return to C was an interruption of service, it could be argued that an attempt to determine whether C would now be effective is dictated by the principle that, given equally probable outcomes, the intervention least aversive to the client should be chosen. Reversal and withdrawal of various components of treatment are justified when resulting findings may indicate a more economical, pleasant, or effective intervention.

The authors agree with Thomas that the focus of service "is on the service outcome, on changes in the targets of intervention. . . ."[11] However, they would go further and contend that maintaining change often requires the use of additional information about the role of intervention, as in the case described by Gardner.

Differences of opinion regarding how changes are to be assessed account for many of the proposed points of strain between research and service considerations. For example, some would argue that when problems are initially presented in the form of verbal complaints, the results of intervention can best be determined by gathering a verbal report after the intervention has taken place. If a client complains about being very depressed and after ten weeks of intervention indicates feeling much better, this is often accepted as evidence of change in the desired direction. Others, although agreeing that the client's verbal report of change is important, would contend that additional indicators of change should be gathered, not for research purposes, but for purposes of case management.

An example in support of this point is the low correlation sometimes found between parental reports of change and change as measured by trained observers.[12] Such discrepancies may have important implications for the delivery of services. Measures should include baseline data and repeated assessments of progress during intervention so that procedures can be modified as necessary and feedback can be provided to clients on an ongoing basis.

Many recent books on casework emphasize the need for accountability to clients, the motivating value of feedback about progress, the importance of clearly specifying objectives, and the case management information provided by the continuous tracking of a client's progress.[13] Such activities and factors are compatible with considerations regarding research, but they are presented in this article as service requirements. As agreement about these requirements increases, divergence between the objectives of service and the objectives of research will decrease. Some frameworks pertaining to practice do not stress the importance of establishing clearly defined desired outcomes and evaluating progress by comparing data collected during intervention with baseline data. Within frameworks such as these, factors viewed as the requirements of research will conflict with considerations regarding service more often than in other frameworks.

The authors do not agree with Thomas that "the purposes of within-subject experimental research are distinct from those of service evaluation."[14] The case described by Gardner does not support this view, and many other studies also fail to support it.[15] The present authors have emphasized that the accumulation of studies using designs that are exploratory in nature can inform the selection of questions to be pursued with the use of more rigorous designs. Thomas singles one study out as being "one of the few accounts of using single-case experiments for evaluation" and suggests that the difficulties involved in conducting single-case experiments for every client indicate the inadequacy of this approach.[16] However, a broader conception of research leads to an appreciation of the significant extent to which useful research data were gathered in the course of clinical practice. In the study Thomas cites, AB, BA, ABA, BAB, ABAB, or multiple baseline designs were completed in roughly 80 percent of the cases. This is a high percentage, and it appears to compare favorably with other approaches to the evaluation of services, such as surveys conducted by questionnaire.

Depending on how one reads the literature on casework effectiveness, it may be argued that many "established" service techniques have not succeeded and that their usefulness requires confirmation. Further, there are many situations in which established procedures have not been used. For example, although differential reinforcement has been shown to be effective in reducing many behaviors of children, this does not "establish" its effectiveness in new situations. Because the relationship between cause and effect (or treatment and outcome) is probabilistic, it is critical for social workers to evaluate the possibility that an "established" treatment is not having the expected effect.

## INDEPENDENT VARIABLES

Points of strain between research and service are exaggerated by selective attention to single-case study designs of the most rigorous variety. For example, some contend, along with Thomas, that research making use of "within-subject experimental designs requires the alteration of one variable at a time."[17] It is true that when more than one variable is used, the relative contribution of each variable to the results observed cannot be determined. Resolution of this interesting issue must await further experimentation using single-case or group designs.

This statement by Thomas just quoted does not recognize the progression of research efforts in which more exploratory designs are used first. A good example is the development of the procedure used in systematic desensitization. This procedure consists of a number of different components, including the formation of a hierarchy, the use of relaxation, and the pairing of items from the hierarchy with the state of relaxation. In addition, a variety of unspecified variables are also present, such as the counselor's verbal reinforcement of the client's progress. Studies suggesting the procedure was effective did not indicate which of the components was necessary, which merely facilitative, and which totally irrelevant. More refined research efforts were required to determine the relative effects of these variables. The statement that research and service considerations conflict because, in practice, intervention consists of many components does not recognize the importance of a continuum of research efforts.

Thomas has identified a number of ways in which the guideline concerning the alteration of one variable at a time is violated in service settings. He mentions that intervention is an ongoing process and that "the interventions the practitioner uses in each session are largely determined by the reactions of the client in the session and by the outcome of previous interventions."[18] As a continuing process, intervention should be adjusted as necessary, on the basis of the constant tracking of progress. If different interventions are used, ongoing monitoring will reveal the changes that occur. Using more than one intervention within a nonexperimental single-case study design makes it impossible to judge the independent contribution of each but can provide useful information to inform other efforts. Attempts at replication will indicate the extent to which these combined interventions are effective with other clients. More vigorous designs can be used to assess the relative contribution of the different interventions.

Another problem raised by Thomas concerns the difficulty of clearly describing interventions and the problems posed for replication efforts by poor descriptions. It is true that producing a clear description requires effort, but it can be done. The clear description of interventive procedures is a critical aspect of the delivery of service, and for this reason it is increasingly stressed in discussions of ethical and legal concerns related to practice.[19]

Systematic recording procedures should facilitate the production of clear descriptions. Thomas argues that even when a complete description is attempted, all factors may not be included. All that is necessary is that *relevant* factors be described. Of course, what is thought to be relevant is not always so. Mistakes in this area will emerge over time through replication in practice and continued research. It is likely that for each intervention there is a range of parameters within which a given effect will be seen, both in terms of the intervention and the client's characteristics. What is important is that the ranges be described. Again, efforts at replication will help determine whether relevant factors have been identified. If a set of interventions proves effective with a variety of clients, confidence that the set has external validity will increase. Other efforts will have to answer questions concerning internal validity.

## PHASES

Single-case study designs use continuous measurement across baseline and intervention. A baseline is a measure of the frequency, duration, or magnitude of some behavior prior to interventive efforts. Rarely, even in the context of research, can pure data relating to baseline be gathered because this is precluded by the changes that take place as a result of assessment itself.[20] However, this does not present an either-or question of whether an ideal baseline exists or does not. There is a range within which informed choices can be made. For example, if a client records the number of negative thoughts he or she has during a baseline phase, and these average about forty a day in number but there is a slight decrease over time, it is possible that self-monitoring was responsible for the decreasing frequency of negative thoughts. Can this trend interfere with an evaluation of the effects of intervention? Not necessarily.[21] If the trend is great, self-monitoring could be continued. In the example just described, no baseline is possible other than a prebaseline estimate of the frequency of the behavior. Reactive effects have yielded a valuable literature concerning the influence of self-monitoring.[22]

The authors do not view a baseline phase as a research phase but rather as an integral part of responsive service, and they would argue that failure to gather a baseline poses a threat to service. Certainly, in some instances the attempt to obtain baseline data must be forgone. Perhaps in no other area is the relationship of research-practice compatability to different practice frameworks so evident as in this matter of the importance of a baseline. Baseline information offers data that are critical to considerations regarding service, such as the rate at which relevant behaviors are performed. This allows for an evaluation of progress and helps both the client and the social worker judge the severity of a problem. The availability of such information, together with data collected during intervention, offers continuous feedback to the client and the worker and allows the timely readjustment of efforts toward change.

A maintenance phase is also a critical requirement of service, not merely a requirement of research. Social workers are not interested only in helping clients achieve temporary benefits; they are concerned about effecting long-range changes. The durability of changes can be known only if progress is assessed at some follow-up periods. Achieving the generalization of desired changes to other contexts and persons and maintaining positive changes over time are important service concerns. Progress can be assessed at selected follow-up periods through probes that require little effort or time by either the social worker or the client. If a client is asked how long he or she wants a change to last and indicates a desire for it to endure for an indefinite time, then this becomes the potential period of service. In such cases, follow-up inquiries do not represent extraneous requirements but fulfillment of the contractual agreement between a client and a social worker to work toward enduring change.

The difficulty of using reversal designs in service settings has been recognized for some time, although, as was noted in regard to the case described by Gardner, service considerations may sometimes dictate their use. In such cases the reversal phase serves as a probe that may offer important information relating to case management. Withdrawal designs may also be effected adventitiously without impeding service. Social workers can take advantage of natural changes such as absences, holidays, and clients' failure to complete homework to obtain additional evidence that an intervention is related to changes that are observed. Settings in which practice takes place also offer opportunities for the use of multiple baseline, multiple and concurrent schedule, and changing criteria designs.[23]

There are designs that do not offer rigorous control over intervention but do enable information to be gathered and also pose no threat to service. In fact, such designs actively contribute to practice. These include the AB design, in which data gathered during baseline (phase A, prior to intervention) are compared with data gathered following baseline (during the B phase). For example, a child welfare worker may gather information concerning a parent's use of punishment and positive reinforcement before as well as during efforts toward change. Burish and Lyles used an ABCBC design to explore the effects of therapist-directed relaxation (B) and patient-directed relaxation (C) in reducing the unpleasant effects of chemotherapy in the treatment of cancer.[24]

## DESIRED OUTCOMES

Research with single-subject experimentation is typically concerned with one well-defined target response. As noted by Thomas, targets of change in service settings are often diverse and may involve many behaviors that are related. Although goals may shift for clinical reasons, this need not impede all research efforts. For example, a social worker helping a depressed client may use a global measure like the Generalized Contentment Scale, together with a measure of a single target behavior, such as the client's nonwork-related discussions with his or her spouse.[25] This procedure would inform the worker about possible changes in target behavior and also in the level of the client's depression. If continuous monitoring suggested that there was no relationship between the target behavior and the global experience, a shift in objectives would be indicated and a new behavior would be selected for change. For example, the new behavioral goal might be increased contact with friends. Although the method for changing the initial behavior, namely, the frequency of nonwork-related conversations, would be abandoned, the monitoring of depression would be continued. A change in objectives does not alter the importance of gathering a baseline for each outcome pursued. One might ultimately have a series of AB designs over the course of intervention.

Objectives should be clearly defined in all cases purely for purposes of service delivery. Practitioners working within a behavioral framework would find such clarity a routine part of their practice. However, social workers who use practice frameworks in which clear identification of desired outcomes is not a priority may experience considerable strain as a result of the demands of research. This strain will be minimized when research efforts use the full range of options available. Here, too, it should be kept in mind that a continuum exists regarding the degree of rigor different designs provide and that weak designs can be useful for exploratory purposes in a research context, as well as valuable for purposes of case management. It is true that when multiple objectives are pursued, one cannot tell whether changes are the result of the intervention alone or are partially a function of correlations among the behaviors. Replication may enable researchers working in a clinical setting to determine these factors.

## ENVIRONMENTAL CONTROL

Thomas identifies a number of problems that may be caused by a lack of control over variables of importance in situations in which service is being received, such as crises in the client's life, the failure of clients to keep records, and limitations imposed on the practitioner by the service organization. There is no doubt that the likelihood of a social worker carrying out the intervention "more or less as planned" is not great.[26]

However, as already indicated, disruptions in service and research can be minimized through the adaptive and creative use of designs that are as robust and responsive as possible. Low levels of robustness and responsiveness may in part be a function of certain characteristics in the clinical situation, but they are frequently a function of rigid or unimaginative application of design. The robustness of research efforts need not be increased at the expense of the responsiveness of service. Within broad limits these two elements are independent. The creative implementation of research designs is likely to increase both.

## CONCLUSIONS

The value of any procedure is partially determined by the way in which the procedure is defined. The goal of single-case study designs can be narrowly defined as demonstrating that an intervention provides experimental control over a given target behavior. This view departs from one stressing the importance of a continuum of knowledge-building efforts ranging from the exploratory to the rigorous, in which findings provide different degrees of confirmation. More exploratory efforts guide the selection of more rigorous efforts. Acceptance of a single goal for single-case study designs obscures the many goals that may be pursued.

What are presented as conflicts between service and research considerations are often conflicts between different models of practice. Practice models that stress the value of the specific identification of desired outcomes, the continuous monitoring of progress so that informed case management decisions can be made in a timely manner, the evaluation of progress by comparison of what is happening during intervention with baseline data, the careful planning for maintenance of positive changes, and the gathering of follow-up data will not conflict with research requisites as much as practice models that do not stress the importance of these components.

It is the authors' hope that the expanded and creative use of intensive single-case study methods, supplemented by less rigorous but still informative designs, will result in a fuller understanding of the use of these designs to achieve goals related to knowledge-building and the delivery of services. The alternatives offered here represent but a sample of the yet unexplored ways in which service and research can be complementary.

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# Single-subject and group designs in treatment evaluation

Srinika Jayaratne

**The single-subject experimental design has emerged as a method of singular import in clinical evaluation research and has engendered much debate between its proponents and supporters of the traditional group designs. This article compares the strengths and weaknesses of the two design approaches and examines their internal and external validity. The author concludes that combined use of single-subject and group designs is the optimum method for clinical evaluation research.**

In recent years, a large number of journal articles and books have suggested that the single-subject design should be the model of choice in clinical evaluation research. Although this author agrees that the single-subject design is an important evaluative model, some perspective must be brought into the picture. What are the strengths and weaknesses of the single-subject (idiographic) approach when compared with group (nomothetic) designs? A number of authors have written on this topic, but it has not been analyzed systematically. The intent of this article is to discuss the merits of the idiographic model as compared to the more traditional group approach within the parameters defined by pragmatics and the requirements of internal and external validity.

Browning and Stover, two of the early proponents of the idiographic approach, argue that "statistical [group] and clinical [individual] prediction cannot be compared because their end goals differ."[1] Similarly, Howe states:

> The scientist usually focuses on establishing nomothetical propositions, or statements governing the occurrence of a general class of events, whereas the practitioner often attempts to establish idiographical propositions.[2]

These authors agree, however, that it is an artificial dichotomy, since there is considerable overlap between the two approaches. Unfortunately, such dichotomous explications have resulted in further separation of the two methods. It is the opinion of this author that the goals are in fact the same—that of scientific and clinical progress—and therefore the relative merits of the two systems must be explored complementarily rather than separately.

## SINGLE-SUBJECT VS. GROUP DESIGNS

Some of the proponents of the idiographic method are adamant that this approach has been neglected for too

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long. For example, Thoresen argues that "research in counseling must go back to the basics: direct observation, careful description, and systematic planned interventions with individual subjects."[3] Browning and Stover add:

> The clinician cannot be satisfied with a finding that works for most individuals. He must choose a treatment technique that will have maximum effect upon the behavior he wished to change in a particular person.[4]

These arguments for observation and description are valid whether the design in question is of the single-subject or group variety. Careful descriptions of the intervention procedures and subjects are essential if any study is to be replicated or, for that matter, if the findings are to be clinically applicable. Although such specification is typical of the idiographic approach, it need not—and must not—be idiosyncratic. All treatment-outcome research should follow these guidelines to insure legitimacy of findings and scientific progress.

Dukes reports that there were 246 single-subject studies reported in specified journals in the period from 1939 to 1963—a small percentage of the total number of studies, but a significant number nonetheless. The vast majority of these dealt with clinical work.[5] Since then, the single-subject approach has burgeoned, with such publications as the *Journal of Applied Behavior Analysis* geared primarily to the presentation of clinical idiographic data. But the validity of these idiographic studies, as with any other study, depends entirely on the scientific methods and procedures followed by the researchers. This author agrees with Gelfand and Hartmann that

> the use of this method in therapy evaluation can powerfully demonstrate behavior control if certain specified procedures [such as adequate baseline, reversals, or detailed descriptions of treatment procedures] are followed.[6]

This does not, however, imply that causal relationships can be established or that generalizations are possible at the same level of validity as with group designs.

In general, the idiographic approach focuses on specific actions of a unique individual, family, or group, whereas group designs compare the average actions of a large number of randomly selected individuals, thus allowing for generalizability. However, Thoresen argues that random sampling in group designs is an "untenable assumption" and that "causal relations can be established by replication of specific results by means of specific intervention techniques across individuals"—that is, by the generalization of data from one client system to another.[7] Browning and Stover, on the other hand, argue that idiographic data "do not warrant generalization to ostensibly similar cases" because they lack random selection or random assignment or contain dissimilar baseline data.[8] Such data, it is contended, are not amenable to group analysis.

Thus, the idiographists themselves are somewhat uncertain about the generalizability of findings from this approach. Replication, however, whether of idiographic or nomothetic studies, is a basic tenet of good scientific methodology rather than a direct or valid method of establishing causal relations. Cause and effect must be established within the context of the particular experimental situation. To rely on replication for the establishment of cause and effect, as suggested by Thoresen, confuses the issues of internal validity (control) and external validity (generalizability).

### CAUSE AND EFFECT

The confirmation of cause and effect is the goal of any evaluation procedure, and there must therefore be internal control of the experimental situation. In general, the idiographic model attempts to establish control by repeated measurements over time, using the subject as his or her own control. Group designs, in contrast, rely on randomizing procedures.

In discussing cause and effect, Campbell and Stanley note that the multiple-baseline design "is an excellent quasi-experimental design," and that it takes into account most sources of invalidity.[9] They are not too clear, however, as to how the two subjects (or behaviors or situations) are to be selected in the application of this design. In general, the design is weak if the population from which the subjects are drawn is heterogeneous. If the investigator is to make valid inferential statements from this design, it would appear that either the population should be homogeneous or the subjects should be matched. However, matching is difficult and creates artifacts, since all the relevant variables are never really known. Although random selection is the better procedure, it requires a homogeneous population, which is unlikely to be found in most social work settings. Hence, the value of this design may be a little overrated from the perspective of clinical practice.

In a similar vein, Paul argues that within the idiographic model the reversal designs offer the strongest procedures for establishing cause-and-effect relationships.[10] The nonfactorial single-group designs encounter the same problems as the basic time-series design (AB), except for the addition of replication measures in the latter, which increases the reliability of the findings. All other designs incorporating control groups have a higher order of validity in establishing causal relationships. In fact, some would argue that even the multiple-baseline and reversal designs offer nothing more than strong correlational evidence.

It would appear, then, that at least some of the single-subject design alternatives offer a reasonable degree of internal control that allows the researcher to establish some degree of causality. It is well to remember, however, that the attained degree of causality is below that which can be obtained by "true" experimental designs using control groups and randomization procedures. These latter procedures, of course, encounter problems of ethics and practicality.

### WHICH APPROACH COMES FIRST?

It is perhaps these observations that have led some to assert that the single-subject design should be used as a preliminary step to suggest new directions that could then be pursued systematically through nomothetic study. Others argue that idiography should follow nomothesis, particularly in view of the fact that although single-subject studies may have limited usefulness from a generalization perspective, they are as good as group studies for rejecting previously accepted hypotheses. Furthermore, if certain principles have been derived from a nomothetic study, a research study could be easily set up to see whether it works with a given individual and, if it does not, to determine what other additional or separate principles are needed.

On the other hand, Browning and Stover, among others, argue that if one is suspicious of the validity of a hypothesis, instead of carrying out a series of single-subject studies, a group study should be conducted.[11] As Du Mas points out, "From a knowledge of a population we can derive much information about a single case, but from a knowledge of a single case we cannot necessarily derive information about the population." [12] The debate as to which should take place first seems to be a rather futile one. Pragmatics dictate that circumstances under which most idiographic studies are conducted preclude nomothetic study. Ideally, those carrying out group studies should attempt to incorporate a series of single-subject studies on a subsample of their group study population.

Alternatively, it has been suggested that idiographic studies be grouped together for purposes of analysis. Statistical validity aside, there is a legitimate basis for the argument. If the "average" individual can represent the "unitary" individual, why cannot the "unitary" individual represent the "average" individual—particularly if replication studies are matched on relevant variables. This is clearly a logical fallacy, but as Sidman points out, "Affirming the consequent, despite its logical fallaciousness, is very nearly the life blood of science." [13]

The proponents of the idiographic approach argue further that group designs rely too heavily on statistics and that outcomes represent the "statistically average" individual in the group.[14] Although it is true that each individual is unique, there is no reason why a specific technique that has been successful with a given group of individuals who have the same problem as the target individual cannot be used on the latter. Naturally, any given individual may deviate from this normative framework, but if that individual has a comparable or similar problem, he or she would be likely to benefit from the general technological format. Undoubtedly, certain modifications would have to be made to fit the unique individual. The least the group data do is to provide a valid framework with which to attack a problem.

When considered in this light, the idiosyncracy issue seems to be moot. The strength of the single-subject approach lies in its individual orientation and perception of the client. Therefore, even to conceive of generalizing across problems or individuals may present a philosophical inconsistency. When generalization does take place, the idiosyncratic client still must be considered—just as with group designs. Thus, the problem of idiosyncratic individuals appears to be common to both approaches, with the group design perhaps having the advantage of a more generic and potentially effective framework for action.

### TIME-SERIES MEASURES

Single-subject designs typically require the continuous monitoring of a client's target behavior (time-series observations), and the clinician can make necessary changes as therapy progresses, depending on the data. For example, this can be done through continuous measuring of the frequency, magnitude, and duration of an individual's target behavior within each phase of treatment—a procedure that does not usually occur in group designs. Group studies, in contrast, tend to rely on estimates at particular points in the treatment process, typically pre- and posttreatment. However, point estimation by itself does not imply a major weakness in group designs, just a different level of measurement. Given both the heuristic and methodological advantages of continuous measurement, there is no theoretical reason why individualized time-series measures cannot also be used in group designs, although, practically, the time and cost factors might prove to be tremendous.

In general, the use of pretreatment and posttreatment measures alone precludes the establishment of cause-and-effect relationships in single-subject designs because of confounding by other variables (issues of internal validity), but it may serve to strengthen existing hypotheses. For example, if the period between tests or observations were sufficiently long, then the spontaneous and uncontrolled fluctuations within the individual's biological, psychological, and sociological processes might generate various sources of error. These and other potential sources of error minimize the possibility of using pretreatment-posttreatment idiographic measurements to establish causal relationships or to construct firm hypotheses.

In contrast, the nomothetic approach typically uses pretreatment-posttreatment measurements, and indeed has been charged with relying too much on statistics, as noted earlier. The fact is, however, that experimental design and statistical evaluation can be effectively separated. A study can be statistically sophisticated but naive in design, leading to justifiable criticism of overreliance on statistics. On the other hand, a well-designed experiment can stand on its own without any statistical trappings, as the single-subject design has done for so long. As Hersen and Barlow argue, "As an ideal, applied interventions strive for changes that ordinarily surpass statistical significance." [15] Such an experiment does not deserve to be criticized for overrelying on statistics. It is interesting to note in this regard, that the proponents of the idiographic approach, although maintaining the distinction between statistical and clinical significance, are increasingly developing and using statistical procedures to confirm their clinical findings.

It should be evident by now that "neither a totally nomothetic, nor a totally idiographic, science can adequately encompass the clinician's task."[16] In fact, the situation seems more in line with Kiesler's observation that the idiographic-nomothetic distinction is misleading to the extent that it dichotomizes the approaches, rather than representing them as different emphases with some overlap.[17]

Finally, the positive elements of the single-subject model need not be exclusive to this approach. Obviously there would be some difficulty in incorporating these ideas into group designs, but there is no inherent or logical flaw in the group approach that would prevent it. Nomothetic researchers should pay heed to the criticisms of the idiographists. Quite often, individual data in group studies do not coincide with the conclusions derived from the grouped data analysis. In other words, the treatment may work for most individuals but not for all. By incorporating idiographic methods, one may be able to make the group designs a bit more "personalized," especially since the treatment goals and desired direction of change for one individual may be counter to those of the overall group.

Each of the two approaches has its positives and negatives. In general, group designs produce data more readily, more quickly, and at less cost (provided time-series measurements are not used). Single-subject studies can help in the negation of established general hypotheses as noted earlier and can further the specific clinical applications of general findings as well as provide data-based models of intervention. Stated simply, to argue for one against the other is an argument against progress.

## ISSUES OF VALIDITY

Questions of internal and external validity and the domains that produce research errors and cause confounding are key issues in comparing the idiographic and nomothetic approaches.[18] The most prevalent research errors can be categorized within the three domains or classes of variables into which they are likely to fall. The *therapist domain* consists of those characteristics and activities of the therapist that may cause confounding with one another or with factors in other domains. Similarly, the *client domain* consists of those characteristics and activities of the client that may cause confounding within one another or with factors in other domains. Finally, the *task domain* consists of those mechanistic and procedural characteristics and activities that may cause confounding with one another or with factors in other domains. In general, a research error is said to exist "if there is a discrepancy between what is concluded and what can be concluded in the light of what was done"—a concept similar to the degree of confidence in the conclusions drawn from an experiment.[19]

Underwood specifies two types of errors that fall under the general rubric of research error.[20] One is "design error," the failure to control for variables within a domain. For example, controlling for sex but not for maturation in a long-term study with children would produce confounding within the client domain. The second type of error, "lethal error," is brought about by confounding across domains. For example, if analysis of the data indicates that black clients performed better when assigned to black therapists, there might be lethal error unless this possibility were controlled for in some manner such as selective assignment.

Since internal validity incorporates both these types of errors, the discussion henceforth will be in terms of internal validity. The above discrimination was made, however, to illustrate another point: the difference between main effects (the impact of one variable) and interaction effects (the impact of a number of variables), both of which become critical when attempting to interpret data. The interaction effects are particularly troublesome in the determination of causal relationships.

In the end, the question of internal validity is a simple one—although the answer certainly is not. Did the treatment cause the change in observed behavior or is there another plausible explanation? The design of a study should attempt to eliminate or control as many of the internal sources of error as possible to reduce the credibility of rival hypotheses. Although it may be impossible to conduct "perfect" research, one could perhaps agree with Underwood's argument that weak research is useless and should not be done. The latter merely adds to the confusion and offers very little in terms of "real" evidence.

Quite often, however, the pragmatics of the clinical situation are such that the choice is limited, and so-called "weak" research may have to be conducted if the field is to advance at all. If in the process one eliminates a plausible rival hypothesis or comes up with one that could be confirmed or discredited later, then the research has indeed been useful. This argument, however, should not be construed as a license to conduct mediocre research. Although the above argument may sound somewhat contradictory, it is an attempt to justify the conducting of clinical research within the parameters of clinical practice, while at the same time paying heed to the values of the research method. Under these circumstances, the investigator should be doubly cautious in interpreting data.

Listed below is a series of threats to internal and external validity. Many of these threats are common to both design configurations, and a few are unique to one or the other. In general, all investigators conducting clinical evaluation research should be well acquainted with these potential sources of error, since the failure to achieve maximum control over the clinical research situation will lead to uninterpretable results.

### INTERNAL VALIDITY

The following threats to internal validity fall into the therapist domain:

*Therapist characteristics* are those personal attributes of the therapist that may have an impact on the process of treatment. For example, the use of titles such as "Dr." or "Social Worker" may have an unknown but possibly differential impact. Variables such as sex and race should also be considered as alternative hypotheses and should be controlled. Although therapist characteristics would be a factor in both design approaches, they are more of a concern in group designs that use more than one therapist. They are, of course, uncontrollable variables in the idiographic method.

*Therapist experience* may be of greater importance in the more complex single-subject designs and is certainly a factor in all group designs. Although experience does not necessarily lead to increased skills, it is likely to do so. Therefore, investigators using more than one therapist in a study should be aware that all therapists may not have had comparable training and professional experience. Clinicians conducting single-subject replications should note that each successive replication leads to accrual of knowledge and experience that probably results in qualitatively different treatment.

Variables in the client domain include the following:

*Client characteristics* may affect the process of treatment just as the therapists' personal characteristics do. Thus all the same factors that are relevant in the therapist domain are relevant in the client domain as well. Failure to recognize such differences among clients would lead to the "patient uniformity myth"—patients at the start of treatment are more alike than different.[21]

*Client motivation and commitment*—the extent to which the client is willing to participate in the treatment program—may in many ways determine the nature of the data collected. This is particularly true when the method of data collection is obtrusive. This would be a critical variable in both design alternatives.

*Concurrent history* poses one of the most serious threats to internal validity, particularly in situations of open service when the client is constantly in contact with the "natural" environment. Many things that happen in the natural environment may interact with the target problem being evaluated.

*Maturation and physical changes* within the client can bring about changes in treatment. The single-subject design is particularly susceptible to error with this variable.

The task domain contains the following threats to internal validity:

*Treatment environment* is one such consideration since there is ample evidence to suggest that changes in the treatment environment can result in significant change in measurement, thus acting as an intervening variable. Such factors as whether treatment is conducted in the home or office, whether others are involved in treatment, and whether the treatment environment is changed during the course of intervention may play a significant role in the interpretation of data.

*Treatment variability* refers to the design's vulnerability to Kiesler's "therapist uniformity myth."[22] Although achieving uniformity among therapists for experimental purposes is a virtual impossibility, it is the responsibility of investigators utilizing several therapists to attempt to control for as much of this variance as possible. If not, treatment results may be therapist-specific, making the effectiveness of the technology under investigation indeterminable.

*Assessment variability* is a concern when multiple evaluators are used in the assessment process. Error may be introduced by the extent of the evaluators' commitment to the process of treatment, their feelings about the client, or other personal biases that may interfere with the measurement process.

*Multiple techniques* are introduced when therapists trained in one school of thought inadvertently use techniques not part of the experimental treatment. (This differentiation among technologies is purely theoretical, since all treatment methods overlap to some degree.) This variable becomes important when a particular treatment technique is the dependent variable. Such approaches as the simultaneous treatment design may become imbued with interaction effects, making it impossible to discriminate among the effects of the different techniques.

*Change produced by measurement* is the often-noted possibility that measurement may of itself bring about change. In general, unobtrusive data collection should minimize this problem. The more obvious the measurement, the greater the possibility of a reactive effect.

*Instrumentation error* can be introduced by certain characteristics of the measurement methods that produce unpredictable results. For example, paper-and-pencil tests may contain certain words or other biasing elements that may be interpreted differently by different people or may elicit socially desirable responses.

*Change in measurement procedure* is a highly confounding variable, occurring when the investigator changes either the methods of measurement or the measurement environment during the course of intervention. At times such changes are imposed by uncontrollable factors in the environment, and when this occurs, the validity of the entire measurement process becomes highly questionable.

*Instability of data patterns* is primarily a statistical threat referring to the instability of pretreatment or baseline data. The greater the variability of pretreatment measurement, the harder it is to establish the impact of treatment.

*Data trend during baseline* is another statistical threat that is possible only when there are multiple measurements available at pretreatment or baseline. If, for example, the goal of treatment is to reduce the score on a given scale, and the time-series measurements at baseline show a decreasing pattern before intervention begins, it would be difficult to establish a relationship between treatment and a final low score.

A distinct pattern emerges from these threats to internal validity. There is a greater possibility of control over the task domain than over the therapist and client domains. Within the idiographic mode, the last two are in a sense givens, and all explanations of treatment effectiveness must consider these factors as possible explanatory variables. In contrast, the nomothetic approach, which incorporates randomization procedures and control groups, is in a better position to control for such errors. On the other hand, by utilizing a large number of clients and therapists, different threats to validity that are difficult to control will be introduced.

## EXTERNAL VALIDITY

External validity, the "generalizability of knowledge in a given experiment to different populations of variables," is significant in treatment research because of the potential for direct application of the results of the experiment.[23] Generalization can only be validated through replication, and hence the need for systematic planned interventions with careful descriptions. Although the selection of a design alternative that has high internal and external validity is the ideal, an experiment may have good internal validity but little external validity. That is, the experimental findings may have high credibility for that particular population or client system, but the conclusions from the experiment may not be generalizable with any degree of confidence. The following list contains the major threats to external validity:

*Pretest sensitizing* occurs when administration of a pretest causes changes in the subject that interact with subsequent experimental manipulations and posttesting. This interaction makes the experimental sample unrepresentative of the rest of the universe that has not been pretested. To avoid error, the same pretesting procedures would have to be repeated in replication studies.

*Selection-treatment interaction* is another threat to external validity. If generalization is to take place, clients should not be selected on their availability but on their representativeness. If selection is biased, there would be an unrepresentative response from the treated sample. This weakness is particularly prevalent in idiographic studies.

*Inaccurate replication of treatment* is a threat since most treatment programs are complex and replication may inadvertently exclude some relevant components of the configuration. This may lead to the omission of the variable actually responsible for the effects.

*Reactive measurements* are found when atypical behavior is observed and measured, or the subject changes as a result of being in the experiment. (This is similar to issues of internal validity.) For example, the measurement may have tapped a low or high point on a cyclic function.

*Multiple treatment effects* are a threat to external validity as well as to internal validity. Since multiple treatments could result in interaction caused by such factors as carry-over effects and contrast effects, generalization would be limited unless the same stepwise procedures were followed in all applications.

*Reactive environment* refers to environmental change brought about by the experiment, artificially making the experimental environment atypical of the regular environment (also known as the Hawthorne Effect). If the change is irreversible, then the same results could not be obtained again with the same subject, a problem for idiographic reversal designs.

*Measurement artifacts* are similar to the instrumentation error cited under internal validity and refer to irrelevant components of measures that may produce uncontrolled effects. Thus, unless the same measures are used in replications, the same errors will not be present, and hence the results could be different.

*Assessment variability* is another factor that is a threat to both internal and external validity. It is external to the degree that evaluators differ in different environments and have different personality and demographic characteristics that limit generalization.

Obviously, there are many sources of error, both internal and external, but at the same time there are numerous designs that control much of this invalidity. Campbell notes that to some degree internal and external validity are incompatible "in that controls required for internal validity often tend to jeopardize representativeness."[24] However, if there must be a choice between the two, internal validity takes precedence, since a well-controlled experiment will enable one to establish causal relations or inferential statements with a high degree of confidence. In general, idiographic designs have minimal generalizability, and therefore those conducting single-subject design research should pay particular attention to issues of internal validity. Nomothetic researchers, in contrast, are concerned with the generalizability of their data and therefore must pay attention to issues of both internal and external validity.

## SINGLE-SUBJECT DESIGNS

Several characteristics of time-series designs pointed out by Gottman, McFall, and Barnett, deserve consideration in the process of conducting an evaluative study.[25] First, time-series designs provide descriptive data, the type of data that is valuable when intervention takes a long time. They provide continuous information on the relevant variables over the entire experimental period. Second, the time-series design is a heuristic device. The practical aspects of these designs can be used to bring about constructive change in a given client system. This is possible only because of the continuous monitoring that provides constant feedback to the therapist on the effectiveness of a specific intervention. Finally, the time-series design is a plausible approach to use whenever group designs are impossible, which is quite often the case in treatment situations. As stated before, the time-series design allows a reasonably strong causal statement to be made if conducted with reversals or multiple baselines, although the investigator can never be sure whether the treatment or some other factor caused the effect.

Lazarus and Davison add a few other characteristics to this list.[26] First, a case study may cast doubt on a general theory, since, as indicated before, one negative finding can bring a hypothesis into question. Second, single-case analysis may provide for the investigation of rare but important phenomena. Third, existing techniques may be modified to suit the specific subject, thus allowing the practical utilization and generalization of a basic technology. And finally, single-subject data can add to the existing substantive material in the field and provide needed data for the development of theory.

There are, however, several problems with the single-subject approach when it comes to generalization and statistical analysis. With respect to generalization, it can be argued that different individuals applying the same treatment to different clients may enhance the generalizability of that technique. Since irrelevant components are found in any therapist's application of a technique, Campbell and Stanley argue that having different individuals do the work would mean that "the specific irrelevancies are not apt to be repeated each time, and our interpretation of the source of the effects is thus more apt to be correct."[27] However, this assumes that there would be random selection of the subjects, an unlikely option in clinical situations.

With regard to statistical analysis, the problems are many. Carry-over effects, contrast effects, nonindependence of data, and the like create significant statistical barriers in the analysis of single-subject designs. Although relatively sophisticated analytic methods have been introduced, such as one-way-fixed-effects analysis of variance and time-series analysis, their methodological validity is still under debate.[28] In addition, several authors have questioned the value of statistical analysis with the idiographic method, arguing in essence that statistical significance differs from clinical significance, and therefore to submit the idiographic approach to statistical testing is to fall into the same statistical trap as inherent in group designs.[29]

Although the reversal designs are perhaps the most popular single-subject designs, they are imbued with some major problems—the central one being the possibility of irreversibility. More often than not, true reversals are impossible to attain or are untenable owing to the nature of the problem. Under these circumstances, some authors suggest the use of yoked controls or breaking up the target behavior into subunits that can be manipulated separately.[30] Either one of these approaches could serve as an acceptable alternative to reversal, as could the use of a multiple-baseline design. Reversals give rise to a critical ethical issue, however, when the target behavior is particularly abhorrent or self-destructive and when mediators are utilized.

One other aspect of treatment that many idiographists fail to consider is the question of length of treatment effect or stability of treatment over time. Although all time-series designs incorporate a large number of observations before treatment and during treatment, there has been little systematic effort at long-term follow-up. In contrast, most group designs seem to consider long-term follow-up almost as a requirement.

Given the multiple observations or points of measurement in single-subject designs, it is critical that the same behaviors be observed or measured at baseline and during treatment and that they be stable—although stability remains an ideal rather than a practical consideration in most circumstances. Lack of equivalence between the measurement periods reduces the validity of the comparisons. It is also important to note whether the observations were made under controlled or natural conditions. The controlled baseline, although possibly artificial, provides a more accurate set of data for comparison. In addition to the temporal inequality of the measurement periods, the effects of waiting for treatment during the baseline phase may influence the behavior as well as the motivation of the subjects.

Finally, single-subject designs are particularly vulnerable to the "patient uniformity" and the "therapist uniformity" myths. In both instances, there is no alternative in the idiographic approach—there is only one therapist and one client system. It could be that the therapy rendered and the effects obtained are particular to that therapist and client system. A further complication arises when replications are desired, since this would require the essential equivalence of clients and therapists, which would not be possible unless matching were done. If there is no matching, the replication falls into the uniformity myth. On the other hand, the degree to which a technique is generalizable to other therapists and clients lends credence to the technique. However, it would be difficult to establish causal relationships over a series of idiographic designs, unless there were some experimental control over therapist and client variability.

Sidman argues that "intersubject replication is a more powerful tool than intergroup replication."[31] Although acknowledging differences in the therapist and client as plausible rival hypotheses, he is somewhat unclear on how to deal with these variables given his methodological stance. He also admits that systematic replication is a gamble, for if it fails, there is no way to determine whether the failure was due to the introduction of new variables or whether the control of relevant factors in the first experiment was inadequate. Whether or not one accepts Sidman's observations, the grouping of idiographic data or their individual comparisons requires statistical procedures—procedures that are questionable and whose assumptions may have to be violated.

## CONCLUSION

This author strongly supports the use of "nomothetic idiography."[32] Nomothetic study by intent and design utilizes grouped data for analyses and seldom involves the collection of individualized data. Although they are time consuming and expensive to obtain, idiographic data offer a different level of measurement. Practically, the collection of individualized data for all cases in a large sample study is an impossible task. However, a subsample, randomly selected from the total experimental population, could be used for this purpose. Such data would allow idiographic analyses and provide another substantive comparative base. This dual approach should alleviate some of the valid fears and criticisms enunciated by idiographists and nomotheticists, while strengthening the inferential power and generalizability of any finding.

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# SURVEY RESEARCH FOR SCHOOL SOCIAL WORKERS

John J. Alderson and Curtis H. Krishef

ABSTRACT: Survey research can be a tool for the school work practitioner to understand school/community concerns and attitudes, needs for services, and how the school social work program operates within the school system. This chapter presents some basic principles and guidelines for the conduct of survey research by school social work practitioners.

Survey research has provided information pertinent to the development of an understanding of the roles and functions involved in school social work practice (NASW, 1976; Costin, 1969; Meares, 1977). Despite this usefulness, there has been relatively little emphasis in the literature on the conduct of survey research by school social work practitioners. Because of its importance, this chapter has been written to provide some basic guidelines for school social work practitioners who wish to conduct survey research.

School social workers generally may not think of themselves as possessing expertise in research. Most are probably familiar with survey research as respondents to questionnaires and from their readings of the literature, but generally they have not engaged in research directly. As Weatherley (1982, p. 332) points out, "research is something done more often to school personnel than by them."

## Why is Survey Research Important for School Social Workers?

School social workers should be familiar with survey research methodology because it provides a means for: (1) understanding school/community concerns and attitudes about the school social work program; (2) obtaining information that may help to explain the manner in which the school social work program operates in relation to other subsystems of the school as well as to the school as a whole; (3) conducting a needs assessment, which may provide the impetus for a new, changed, or expanded program; and (4) partially determining the effectiveness of a school social work program. Survey methodology provides the school social worker with a way to understand the feelings and attitudes of those for whom s/he is providing services.

## What is Survey Research?

Surveys record information about participants by asking them to answer questions about themselves (Adams & Schvanaveldt, 1985). Experiments often try to change people by using an intervention such as counseling or behavior modification (Babbie, 1986). The intent of experiments is to discover whether the intervention affects the subjects of a study in some predicted way. Survey research, instead of attempting to change people, tries as much as possible not to change anything or exert any type of influence on people who are being studied.

Although survey research is quite dissimilar from experimental research it is allied to census research. Survey research differs from census research in that census studies are usually concerned with an entire population, whereas survey studies will generally focus on a representative sample of a population (Moser & Kalton, 1972). Thus, by means of a survey the researcher is able to generalize about many people by studying only a few.

## Caveats to Keep in Mind About Survey Research

Survey research tries to generalize by describing the characteristics of a population from a sample of that population. Errors, however, can creep into the process of generalizing. One example of potential error is caused by the fact that while the characteristics of a sample from which data have been obtained will be completely known, we are never certain that the sample truly and accurately reflects the characteristics of the population (Kachigan, 1986). Therefore, the results of survey research must always be interpreted with caution. The following statements describe the basic and inherent flaws that can produce inaccuracies and misinformation for almost all survey research.

1. Surveys require a sample of sufficient size to assure that it has qualities representative of the population characteristics (e.g., race, sex, religion), especially those variables that are crucial to the study. Obtaining a representative sample is an involved task; no research project can be absolutely assured that the sample from which it has been drawn is completely reflective of the population. As a general rule the larger the sample the more accurately it will reflect the

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population. The sample size that is selected, however, should be based upon the degree of accuracy of results desired by the researcher.[1]

2. Surveys require the cooperation of people and may intrude into the lives of those who are asked to participate. Such intrusions create an artificiality which is uncharacteristic of the way people would be if they were not, for example, asked to answer questions on a questionnaire. When people know they are being studied or that their opinions are being solicited, they may change. Such changes can result in spurious information which then biases the results of the survey study (Babbie, 1986; Simm, 1978).

3. Surveys require accurate answers. Although people may try to give honest and true information about themselves they sometimes are forgetful. Fearing embarassment or thinking they remember something when they do not, people may distort answers.

4. Survey research often encounters problems in finding people. People move, they may not be at home, or they may be uncooperative or unwilling to respond to questions. Those who are at home or those who are cooperative may give quite different answers and have dissimilar opinions from those who are not at home or who do not wish to participate in the research (Simm, 1978).

While the limitations listed above cannot be entirely overcome even with the best designed survey study, an awareness of their existence is important. As stated previously, caution must be exercised in reporting results because of these types of errors.

## Who Does Survey Research?

Survey researchers may be: (1) those who work, usually in larger organizations, primarily as researchers; (2) those who are employed by research firms or universities; or (3) practitioners who also work for the organization and have an interest in research. The intent of this paper is to focus on the third category because it is anticipated that school social workers will engage in survey research.

"In-house researchers" are employed by and work for an organization with their primary functions being either research or service delivery. Researchers who are hired from private research firms or from universities are usually called consultants. In-house researchers generally have an advantage over consultants because they are usually better informed about an agency's services. In addition, they know the staff who deliver those services, tend to be trusted over outsiders, and probably have a better understanding of some of the political nuances that may exist within the organization. Consultants, on the other hand, may be more objective because they are not as intimately involved with the organization. Consultants may also have greater technical skills in conducting survey research because of specialized education and experience.

There is also a middle ground between the exclusive use of an in-house researcher or a consultant. The efforts of the in-house researcher and a consultant may be combined to jointly carry out a study. Practitioners may also be involved in the research. Bok (1980) has emphasized that whenever nonprogram staff are employed as researchers, school social workers should use the experience with these individuals as an opportunity to increase their own research skills.

## Questions the School Social Worker Should Ask Before Beginning A Survey Research Project

Before starting a survey the following important questions should be asked and answered.

Is data already available about the subject to be studied?

If a review of the literature and other materials pertinent to the study indicate that information is already available, then it makes little sense to do another survey unless the existing data is seriously questioned. For example, a worker may be interested in determining what the racial composition is of children in classes for learning disabled and severely emotionally disturbed in the school system. Instead of undertaking a survey, it would be important to determine whether school files or other data already exists that would provide the information.

Is the information really going to be helpful?

It is important for the researcher to step back and attempt to make an honest judgement as to whether the results of the research will indeed be helpful both to the researcher as well as to others.

What is the population of interest about which generalizations are to be made?

The population must be clearly defined; otherwise inferences derived from the sample about the population will not be accurate.

What resources are available?

Parsimony dictates the approaches that should be used to do survey research. Unfortunately, survey studies often require considerable money because of staff, salaries, supplies, and equipment. Therefore, it is wise to determine in advance of a study that sufficient resources will be available to carry the survey to completion.

## Ways of Getting Information

There are three major ways that school social workers engaged in survey work obtain their information: face-to-face interviews, telephone surveys, and mailed or hand distributed questionnaires.

### The Face-to-Face Interview

Face-to-face interviews can be conducted in the home, in the social worker's office, in the school lunch room, or other places where people can be met and asked questions. For example, face-to-face interviews were used as a part of an evaluation of a differentiated staffing project directed by one of the authors. Eleven administrators were interviewed in six schools served by the project to determine their attitudes and perceptions about the effectiveness and advantages/disadvantages of the differentially staffed team operation (Alderson, 1980).

During the face-to-face interview, the interviewer should always try to develop rapport with the interviewee by means of casual conversation before the interview begins, or by other means that can be used to establish a positive relationship (Drew & Hardman, 1985; Tripodi, 1983). A compatible relationship provides a decided advantage for the interviewer because anxiety about the interview can be allayed, and the respondent may feel more at ease and be more attentive to the questions that are asked.

The face-to-face interview has advantages over the telephone survey because the interviewer is able to visually observe the respondent (Babbie, 1986). Sometimes body language and facial expressions can be very helpful in understanding exactly what the respondent is saying (Van Dalen & Meyer, 1966).

The nature of the interview can range from completely unstructured to totally structured. The interview which is most structured and which permits the interviewer the least freedom to deviate from the actual questions on the questionnaire is called an interview schedule. The questions, the way they are worded, and the sequence in which they are presented are all fixed in advance and the interviewer is required to follow a relatively inflexible procedure when asking questions. The interview schedule is often used to eliminate the risk that rewording questions will result in an inaccurate or incorrect response. If interviewers are given the independence to change the wording of a question, the answer might be different because each time the question is asked it could be worded in a slightly different way. That type of problem does not exist if all questions are worded in advance with essentially the same format (Grinnell, 1988).

Williams (1970), for example, took into consideration many of these characteristics when he used structured personal interviews with principals and school social workers to determine the acceptance of social work activities in schools. Findings emphasized the crucial role of the school principal in promoting effective school social work.

The second form of interview is often called the unstructured interview. With this form, the major topics of interest are specified in an interview guideline, but the respondent is given much greater opportunity for self-expression, and the interview is less structured as compared to the interview schedule. Sometimes there may even be a list of specific questions to ask, but the interviewer is not restricted to the list and is free to ask additional questions. The interviewer must be able to use judgement in deciding whether to move into areas that might provide information useful for the purpose of the research.

One of the problems faced by the interviewer in an unstructured procedure is how the data will be recorded. The answers have to either be summarized in written form or recorded on a tape recorder. While a tape recorder provides an excellent source for capturing all of the information provided by the person being interviewed, it also has drawbacks. Many people are hesitant to speak freely when a tape recorder is running--and an uneasy respondent may not give accurate or complete answers.

If the answers are not going to be tape recorded by the interviewer, a guide can be developed that quickly permits the circling of common responses. For example, if the respondent is a teacher, that person could be asked:

1. "How do you feel about 'Such and Such' Program?" Answers that could be circled to quickly capture the nature of the response might be: (1) enthusiastic; (2) strongly positive, but not enthusiastic; (3) slightly positive; (4) slightly negative, or (5) strongly negative.
2. "Has anyone shared with you their views about the program?" (1) Yes; (2) No. If the answer given is "yes":
3. "When was it discussed with you?" (1) at a teacher's conference; (2) at a staff meeting; (3) in a private conversation; or (4) other ________________________________________.

The above questions minimize the amount of writing required while still allowing the interviewer the opportunity to categorize the feelings of the person being interviewed. When the structured interview is used, it is unnecessary to have the type of guide exemplified above.

Face-to-face interviewing can be an excellent source of information for survey research. It should be noted, however, that personal interviewing is expensive and time-consuming. It often takes time to travel to the interviewee; there is the expense of the travel, and a considerable amount of time is expended in doing the interview (Kerlinger, 1986).

There are other disadvantages. When the researcher must hire staff to conduct interviews, the cost rises considerably. Additionally, s/he has little control over the way the interviewers behave in the field. The researcher must depend upon the honesty and professional behavior of those employed to do the interviewing.

Although it has many positive and some negative points, the face-to-face interview is declining in frequency of use. Many people are now being interviewed by telephone (Backstrom & Hursh-Cesar, 1981).

## The Telephone Interview

The use of the telephone as a means of collecting data has increased considerably during recent years. Telephone interviews are most successfully conducted when a roster of names is available. School social workers within a given state, or 6th grade teachers in a county, or university students studying in elementary education, are all examples are groups for which specific rosters are readily available. Telephone surveys can be done quickly because no travel is necessary and are therefore more affordable (Babbie, 1986). There are virtually no geographical limits because a survey covering a wide area can be conducted at minimal cost. The attitude that the information obtained through telephone interviews was less accurate than face-to-face interviews has changed in recent years. Most researchers now consider data obtained over the telephone to be as accurate and as complete as data obtained from face-to-face interviews (Bailey, 1987).

## The Mail Survey

Mailing or distributing questionnaires to respondents who read, complete and return them to the researcher are usually used for relatively large survey studies. As examples, Costin (1969) and Meares (1977) conducted research on tasks in school social work practice. They surveyed national samples of M.S.W. school social workers in order to determine the importance respondents placed on behaviorally specific school social work tasks and their willingness to delegate tasks to workers with less education. While the findings of the two studies differed in various ways, they concurred that tasks associated with leadership and policy-making were of lowest priority, and there was a strong unwillingness to delegate tasks to those with less education.

The mail questionnaire is advantageous because a considerable amount of information can be obtained at minimal cost. Another major advantage is that the skills of the interviewers will not bias the results by the way they ask questions, either by their voice inflections or by their actions (Leedy, 1980).

The main difficulty with mailed questionnaires is that of obtaining an adequate response rate. Mail surveys consistently produce a smaller response rate than personal or telephone interviews. Typically a researcher can expect about a 95% response rate for personal interviews but only about a 20% to 40% rate of response for a mailed questionnaire (Nachmias & Nachmias, 1976). Another problem with mailed questionnaires is that people who are not very interested in the subject of the study are less likely to respond. Responses from interested people may be quite different from those who are not interested and the researcher has no control over who will respond or how conscientiously they will respond.

## Procedural Steps for Doing Survey Research

The procedures for doing a survey are usually incorporated in a research design which basically explicates the steps that will be followed from the beginning to the end of a research effort. There are a series of logical steps that should be included in the research design covering the beginning, implementation, and completion of a survey study. Detailed information on these steps follows:

### Circumscribing the Focus of the Study

Before any research can be started the researcher must first define the problem to be studied, specify the goals, and set the boundaries that the study will cover. Questions such as "What are the characteristics or variables that should be considered for the study?" must be clarified.

### Reviewing Material Pertinent to the Study

If not already knowledgeable, the researcher should become thoroughly familiar with books, reports, articles, documents, and records that will provide background information about the subject of the study. Without an in-depth knowledge about the topic, the researcher will probably be unproductive.

### Stating the Questions

Once the researcher has made a thorough review of materials pertinent to the research, it is then time to state the questions that the study will try to answer.

### Making Certain the Study is Well Designed

The researcher should make every effort to assure that the study will produce valid and reliable results. Results are usually considered valid when they are relevant and useful to human service professionals. When results are reliable, there is confidence that the findings are not unique but rather are consistent. Reliability answers the question, "Would I get the same, or essentially the same results, if I did the study a second or even a third time?"

### Working out the Mechanics of the Survey

During this step the researcher must consider the details about supporting the research to its conclusion. Questions must be answered, such as: What sort of personnel will be necessary to carry out the study? Who will direct the project? How long will it take to complete the study? What support services will be necessary? Who will do the interviewing and coding of information? How will the data be processed? Will I have enough money and resources to carry the project to completion?

### Selecting the Sample

This step concerns the method of sampling from the population. The researcher should endeavor to draw a sample that will be representative of the population so that conclusions drawn about the sample will be appropriate for the population. There are two basic forms of sampling procedures that can be use: a probability sample and a nonprobability sample. A probability sample assures that every person in the population has a known chance of being selected for the sample. There are several random selection procedures that can be used for a probability sample, such as using a table of random numbers (Norusis, 1987) or drawing names out of a hat.

Nonprobability samples are ones where human judgement is used in selecting respondents. When human decision determines who will be selected for a sample, it is not possible to make reasonable estimates about the population's characteristics; samples of this type tend to be flawed by human biases. Nevertheless, many survey research projects have used nonprobability samples because they may have been more appropriate for obtaining necessary information than probability samples would have been. As a general guide, however, a probability sample should be used whenever possible in preference to a nonprobability sample (Backstrom & Hursh-Cesar, 1981).

### Writing the Questions

While it may seem simple, writing questions takes considerable skill and thought. A clear perception of the purpose of the research is essential to the formulation of focused, precise questions. Questions must be clear, unambiguous and geared to the level of comprehension of those who are answering. The number asked must not be overwhelming or too time-consuming. Questions cannot be couched so as to suggest a particular type of response and should not be asked if they assume a knowledge about a subject that the respondents may not have. The wording of questions dealing with religion, income, sex, voting, etc., must be considered very carefully so as not to embarrass the respondent. Lastly, the questions must be pretested in order to assure that they make sense and are understandable to respondents.

Questions can be classified as either fixed-choice (closed-ended) or free-response (open-ended) (Bailey, 1987). A fixed-choice question gives the respondent a selection of specific answers to the questions that are being asked, for example "yes" or "no," or "agree or disagree." Free-response questions offer the respondent an opportunity to discuss the answer without the restrictions of preset categories. Fixed-choice questions are more restrictive but easier to analyze. Free-response questions allow the respondent greater latitude as well as greater depth for his or her answers, but these types of open-ended answers are quite difficult to analyze.

### Developing the Physical Lay-out of the Questionnaire

The appearance of a questionnaire is exceedingly important. A questionnaire with mispellings and words that are hard to read indicates to the respondent that the researcher cared little about the instrument; such questionnaires are less likely to be answered. In contrast, a questionnaire that is neat in appearance, provides a logical sequence of questions, is readable, and relatively short, will have a much greater chance of being answered and returned (Powers, Meenaghan, & Toomey, 1985).

### Pretesting

Pretests of survey research projects are a form of dress rehearsal for the full-scale study (Dillman, 1978; Sudman, 1967). The idea of the pretest is to use a small group of people with the same characteristics as those that will be in the main study to identify questions that are ambigious or unclear (Powers, Meenaghan, & Toomey, 1985).

A pretest can also identify whether the study has merit. Some people may question the value of the study and as a result may refuse to participate. In addition, a pretest can help to determine the range of possible responses to certain questions and can serve as a predictor for methods that might be used for analyzing the data.

### Data Collection

This is the step where information is actually collected from people through a mailed or hand distributed survey, a face-to-face interview, or a telephone interview.

### Data Processing and Analysis

Once all of the information has been gathered it is necessary to analyze the results. The information obtained on questionnaires or from interviews can be analyzed in various ways. Sometimes it is only necessary to describe the data by indicating how many or perhaps what percentage of the people surveyed hold a particular opinion. In other situations a desire for more far reaching conclusions will require statistical analysis of the data in order to make inferences from the sample to a population.

### Reporting the Results

The purpose for writing a survey research report is to inform relevant audiences of the nature of the problem that was surveyed, the specifics of how the project was implemented, the results, and the researcher's conclusions.

The research report should be written clearly and concisely. It should include tables and figures that present the important data in a succinct and easy to understand form. The following is a suggested format in writing the research report: (1) an introduction describing the purpose of the research; (2) a review of available materials or literature pertinent to the research; (3) a statement of the questions for which the research was attempting to obtain answers; (4) an outline of the procedures that were used including a description of how the sample was obtained, the questionnaire, and steps that were followed to obtain the data; (5) the method(s) by which the data were analyzed; (6) presentation of the results; and (7) recommendations, if any, from the researcher.

## Conclusion

It is strongly recommended that the practitioner inexperienced in research seek out consultation on the research design and implementation. Because there is an interdependence that exists between each of the twelve procedural steps described previously, a deficiency in one level may have an adverse effect at another point in the research. For example, if one defers involvement of a consultant until the data is collected, and then learns that the data does not lend itself to desired analysis, the research will be a largely wasted effort. Consultation may be available from researchers within the school district or at a nearby university.

Survey research may have effects similar to other interventions and might have unintended consequences. Therefore, it behooves the practitioner-researcher to include and plan with persons and groups who will be involved and potentially affected by the research. When the research is completed, the written report should be shared with those who may be affected, and with decision makers who may wish to use the information in program adjustments and development. The supplementation of written reports with verbal reports and meetings with significant persons involved in and affected by the research is important. These forms of communication may serve to generate additional questions and support for further research.

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## Footnote

[1] Mathematical formulas are available to enable the researchers to determine levels of confidence. The reader is referred to Nachmias and Nachmias (1976, pp. 253-259) or Mendenhall, Ott and Larsen (1974) for discussion of alpha levels in relation to size of samples.

# EVALUATION OF PERFORMANCE:
# WHERE DOES IT FIT IN?

Norma Radin

ABSTRACT: An evaluation of a school social worker's performance must include assessments of the practitioner's effectiveness as both a provider of services and as a member of an organization. In both types of assessment, emphasis should be on attainment of specific goals, not on general impressions.

School social workers, who by definition function within an organization, have two sets of relationships: one with clients, or those whom they are attempting to help; and the other with colleagues, or those with positions in the same organization who are also attempting to deliver service. It is true that the line of demarcation between client and colleague is sometimes blurred. For example, in helping their youngsters cope with traumas such as the death of a friend, parents who are stable and sensitive may function as colleagues of school social workers. At other times, teachers who severely reject students because of racial or ethnic factors may well become clients of social workers, at least temporarily.

However, for the most part, the practitioner's colleagues are employees of the school system, and his or her clients are students or their parents. A different set of expectations accompanies each of these role relationships, and to be effective in the two roles, the social worker must achieve different types of goals and objectives. For this reason, evaluation of practitioners requires an examination of both sets of relationships. The weight given to each role in determining whether a worker is given a merit increase or denied tenure depends upon the particular school system. There have been some reports of programs in which supervisors have conducted outcome evaluations.[1] However, such

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programs are the exceptions, and most administrators appear to give organizational behavior heavy emphasis.

This is not intended as a denigration of efforts to determine how desirable an individual may be as a member of an organization. The point is that it is necessary to be aware of which factor is being assessed. The worker who infuriates colleagues because of neglected record-keeping and irritability with peers may be able to effect magic with young children; the neat, witty colleague may be unable to elicit trust from parents. Superiority in one area does not automatically indicate superiority in the other.

### Evaluating Practitioners as Providers of Service

In the following analysis, a model that the author developed previously for assessing the effectiveness of school social workers will be used.[2] Briefly, this paradigm suggests that one must start with goals for clients or statements of desired outcomes that are not only comprehensive, but are realistic and attainable. From these goals are derived objectives that are stated in measurable, concrete terms.

In assessing the attainment of objectives, two dimensions must be considered: (1) criteria for determining effectiveness, and (2) the modalities or tools for assessing whether the criteria have been met. Three criteria for success are delineated: (1) improved feelings and attitudes of clients, (2) improved views of significant others about clients, and (3) indices of competent social functioning. The following seven modalities are identified: (1) hard data, or objective reports of events, (2) tests, (3) observations of behaviors, (4) rating scales, (5) questionnaires, (6) interviews, and (7) self-reports. Other tools that might be considered are Q-sorts and ranking scales. The particular modalities and criteria selected are dependent, among other things, upon the theoretical orientation of the practitioners, the resources available, the wishes of the administration, and the preferences of clients.

The following example illustrates how objectives, criteria, and modalities mesh together. If the objective is to improve a boy's peer relationships by increasing the number of children he plays with during recess, the criterion that might be used is "indices of competent social functioning," and the modality, "observations." The worker would then establish some procedures for observing the child at play over a period of time, starting with some instances prior to intervention, and ending with some observations after the intervention terminates.

If the criterion selected is "improved views of significant others," and the tool is "rating sheets," the worker might ask the teacher to rate the child on the frequency of his interaction with peers during recess at the beginning and end of the intervention with the child. If the criterion chosen is "improved feeling and attitudes of clients," and the modality is "self-reports," the youngster might be asked to keep a daily record of his conversations with classmates prior to, during, and after the treatment.

This model also differentiates effectiveness evaluation from effort, or process evaluation. The latter refers to the evaluation of the actions the worker undertook in implementing the intervention plan. Process evaluation is essential because it enables the practitioner to gain clues as to why an intervention may not have been effective. It might be found that the full plan was never implemented or that it was poorly implemented. The quality of an action such as the holding of an interview, the conducting of a meeting, or the preparation of an information handout can be evaluated by having supervisors or outsiders with expertise either observe the sessions first hand, listen to tapes made of some sessions, or read the material developed.

All of these evaluations are made in regard to specific efforts and specific clients. Taken individually, no rating can reflect the worker's general competence in conducting interviews or group meetings or in performing other such activities. However, as a collection, such assessments are revealing and of use to supervisors evaluating practitioners. This issue will be discussed further at a later point.

Control Techniques. The evaluator should have little difficulty in applying this model to the individual practitioner. A problem arises, however, when one tries to utilize control techniques to be certain that the intervention actually accounted for the observed changes. (It might have been merely the onset of spring that brought about the changes.) One control strategy is to match two clients on demographic characteristics, and then use one intervention strategy with one youngster and a second strategy with the other child. The second intervention may consist of no more than unfocused conversation with the child, or arranging to have him or her spend some time with a teacher's aide or a nonprofessional volunteer. The effectiveness of the treatment can then be compared with that of the pseudotreatment. The worker need not feel guilty about using pseudotreatments, for placebos have occasionally been found to be as effective as therapy or medication.

Another control technique is placing a youngster matched to the client on the waiting list for service, or selecting someone on the existing list as a match or control for the client. Preintervention and postintervention measures would then be made of the clients receiving treatment and of those who acted as controls, and at the end of a predetermined period, the students waiting for help would be served. This approach, which is referred to as the time-lagged control design, has the drawback of delaying service for some, but it provides an opportunity to control for nonrelevant events in the environment.[3]

Use of the time-lagged control design with a single pair of clients does not established proof of the worker's overall effectiveness, but if the design is used on a number of clients throughout the year, or if the previously mentioned comparison approach is used several times, significant data begin to accumulate. When at least five clients have been compared with a control or comparison client, the evaluator can use statistical procedures such as the sign test to determine if more than chance is involved in the worker's ability to achieve desired outcomes. Five successes out of five trials rules out chance.[4]

Another technique for determining whether the worker's intervention resulted in a significant change is the interrupted time series design. However, there are limitations to this approach when the evaluator does not have access to a computer.[5] But even without a computer, it is still possible to "eyeball" the data; that is, to examine a graph that plots the scores obtained on a single measure over a period of time, including several instances before, during, and after an intervention. If comparable scores are available for both a control subject and a client, one can make a visual analysis of the graph lines for each.

Should the graph line for the child being treated slope steadily upward over a period of time on a measure such as the number of daily assignments completed, while the line for the control child slopes steadily downward or remains level, there is a strong suggestion that the intervention was effective.

Visual analysis of data is regularly utilized by behaviorists to assess effectiveness.[6] This procedure should also be useful to school social workers when they have access to data that were collected on control subjects and clients over a significant period of time. It is unwise, however, to use the technique of visual analysis when data on only the client are available, as false inferences might be made.[7] For example, if the graph line for a client without a control reflected no change, the interpretation might be that the intervention was a failure. This would be untrue, however, if a control subject had been used and had produced a graph line that showed a steady decline. Thus, if the attitudes of untreated students toward school become increasingly negative during the year, and the clients' attitudes remain unchanged during the same period, the intervention was a success and not a failure.

Two other factors that affect evaluation programs are the itinerant nature of school social work and the systems perspective advocated by many contemporary writers in this area of practice.[8] Because of these factors, school social workers should not limit themselves to setting goals for individual clients. They should also set annual goals for each of the schools they serve, for as many classrooms as possible, and when realistic, for entire school districts. In all instances, school personnel at the appropriate level of the system should be involved in the setting of goals. Such personnel should include principals, classroom teachers, and other members of the support staff. A goal for a school might be a reduction in the absenteeism rate; a goal for a classroom might be an increase in the social interactions between students of different races; and a goal for a system might be the development of a program to detect child abuse.

The assessment of effectiveness in attaining objectives derived from such goals is similar to the assessment of effectiveness in work with individual clients, except, of course, that the criterion of improving the feelings of clients would be omitted. The remaining criteria (views of significant others and indicators of competence) are suitable, if slightly reworded. Many tools could be used to determine whether the criteria were met, such as the use of hard data, observation, rating scales, questionnaires, and interviews.

## Evaluating Practitioners as Members of a System

Before one can assess a practitioner's performance in the role of a member of the system, the expectations held by others in the system must be specified. The evaluator can then attempt to determine the extent to which the expectations have been met. Nye, a role theorist who conducted research on this subject, provided models for learning the norms surrounding each role and the degree of role enactment by each role player.[9] Evaluation forms can be developed that would suggest a number of expectations that are held for social workers by school administrators. Examples of such expectations might include specification of the number of cases carried each month, whether recording was adequate, and whether work habits were satisfactory. These expectations resemble group norms, which according to Thibaut and Kelley, are almost indistinguishable from group goals.[10] As goals, their attainment can be evaluated using the previously described model for assessing effectiveness. The criterion of improved client feeling would again be irrelevant, but the remaining criteria, if slightly reworded, would be appropriate. Many modalities can be used to assess attainment of objectives, such as hard data, Q-sorts, rating scales, questionnaires, and interviews. All but hard data should involve responses of administrators, teachers, special educators, and possibly even other school social workers.

Tables 1 and 2 suggest forms that could be used to assess workers' total effectiveness using the model described here.

## Evaluation of Skills and Knowledge

It is important to note that there are serious problems in evaluating school social workers' skills and knowledge in the abstract, apart from their effectiveness as providers of service and members of an organization. There are two major issues involved: Can it be done? and Should it be done?

TABLE 1. SAMPLE FORM FOR ANNUAL EVALUATION OF A SCHOOL SOCIAL WORKER'S EFFECTIVENESS AS A MEMBER OF A SYSTEM[a]

| Objective or Expectation | Criterion of Success in Attaining Objective | Modality Used to Assess Fulfillment of Criterion | Whether Objective Attained |
|---|---|---|---|
| Recording up to date | Indices of adequate functioning | Reports in client's folders | No |
| Good relations with teachers | Views of significant others | Rating sheets completed by sample of teachers in schools served | Yes |
| Good relations with principals | Views of significant others | Interviews with principals | Yes |
| Participation in school functions | Views of significant others | Interviews with principals | No |
| Adequate number of cases carried | Indices of adequate functioning | Report submitted to supervisor | Yes |

[a] Entries in this sample are meant to suggest the type of information that might be included in such an evaluation and should not be considered comprehensive or invariable.

TABLE 2. SAMPLE FORM FOR ANNUAL EVALUATION OF A SCHOOL SOCIAL WORKER'S EFFECTIVENESS AS A PROVIDER OF SERVICE

| Client or Client System | Objective | Criterion of Success in Attaining Objective | Modality Used to Assess Fulfillment of Criterion | Whether Objective Attained[a] |
|---|---|---|---|---|
| Individual Client | | | | |
| a | 1 | | | |
| | 2 | | | |
| b | 1 | | | |
| c | 1 | | | |
| | 2 | | | |
| | 3 | | | |
| Classroom | | | | |
| a | 1 | | | |
| | 2 | | | |
| b | 1 | | | |
| | 2 | | | |
| School | | | | |
| a | 1 | | | |
| b | 1 | | | |
| | 2 | | | |
| | 3 | | | |
| SchoolSystem | | | | |
| | 1 | | | |

[a] Answer yes or no, using an asterisk to indicate objectives for which control procedures were used.

In regard to whether it can be done, a recent follow-up study of graduates of the University of Michigan School of Social Work is relevant.[11] In this study, over 380 graduates provided the names of their supervisors and gave the researchers permission to contact these persons. Questionnaires were then mailed to supervisors, asking them to rate each graduate they knew on seventeen items, such as knowledge of theory, skill in applying theory to practice, skill in problem assessment, and enthusiasm. Responses were received from 321 supervisors, and a factor analysis was performed on the ratings to determine the dimensions underlying the seventeen questions. It was discovered that there was only one factor involved, and the item with the highest rating on that factor was "overall effectiveness." Thus, the researchers may have thought many different characteristics of each graduate were being assessed, but in reality, the supervisors were responding to the same question over and over again with a global evaluation. In view of these results, there are serious questions about the validity of asking supervisors of social workers to rate discrete characteristics such as self-awareness or knowledge of causative factors in malfunctioning. In most cases, only overall impressions will be given in response to each item.

Concerning whether global evaluations of practitioners' skills and knowledge should be made, it is the author's view that professionals with MSW degrees from accredited schools of social work with relevant majors ought not to be assessed on whether the issuing of that degree was warranted. It would be more appropriate to make an assessment of graduates' knowledge in areas not typically included in their training, such as the needs of severely mentally impaired children, resources in a particular community, the latest court decisions pertaining to the rights of children, or new intervention strategies.

## Examination of Samples

If, in spite of the dangers listed above, the administrator still believes it is essential to assess the practitioner's social work skills and knowledge per se, it is suggested that reviews be made of the tapes, documents, and observations that have been collected as part of the process evaluation of interventions. That is, evaluators should examine actual samples of the school social worker's performance. Such samples, if not already evaluated, can be rated by knowledgeable school personnel or given to outside experts to assess. This is virtually the only valid way to evaluate professional expertise.

A dissertation recently completed by Kozak in the counseling program at the University of Michigan School of Education revealed that there were few significant relationships between counseling instructors' evaluations of students in a practicum and the ratings of outside experts who were given sample tapes of student interviews with clients.[12] It was clear that other variables (conceivably a student's attractiveness or warmth) were affecting the evaluations of the instructors. It is likely the results would not be to different if such a study were conducted with instructors at a school of social work or with supervisors of social workers in a school system.

## Summary

It is suggested that evaluations of the individual school social worker's performance should have two components: one an assessment of the worker's functioning as a provider of service, and the other an assessment of the worker's functioning as a member of the organization. In assessing the practitioner's performance in the provision of service, the evaluator should focus on assessing effectiveness in attaining stated objectives through the use of outcome criteria and various tools for determining whether the criteria were met, and should place special importance on instances in which control procedures were used. As data accumulate on a number of interventions at the levels of the individual worker, the classroom, the school, and the district, a picture of the worker's effectiveness as a provider of service will emerge.

The social worker's performance as a member of an organization can be assessed by specifying the expectations that others hold regarding this individual and then assessing the extent to which the expectations were met. Again, the evaluator should use criteria of success, together with modalities for testing whether the criteria were met. If it is necessary to assess the practitioner's social work knowledge and skill in the abstract, the accumulation of data on process evaluation can supply concrete information about the skill of those who provide service and about their ability to apply theory to practice.

The federal government has mandated accountability by school social workers who are involved with handicapped youngsters. Thus, the assessment of effectiveness is a topic that can no longer be ignored. But organizations also have imperatives that must be met if the organizations are to survive, and one imperative is that members behave in a manner that fosters the productivity of other members of the system. Perhaps by distinguishing between school social workers' roles as providers of service and as members of organizations and by relying on evidence rather than impressions, those who evaluate performance will be better able to make informed, valid, and equitable judgments.

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[2] See Norma Radin, "Assessing the Effectiveness of School Social Workers," *Social Work*, 24 (March 1979), pp. 132-137.

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# INDIVIDUALIZED EDUCATIONAL PROGRAMS AS A TOOL IN EVALUATION

Jean Campbell

ABSTRACT: Individualized Educational Programs mandated under Public Law 94-142 can serve as instruments for the evaluation of practice. The author's concise, concrete explanation of this system includes helpful samples of goals, objectives, and an evaluation form.

Program evaluation in school social work practice is a dynamic process and must effectively interface accountability at departmental and staff levels. The school social worker and program supervisor encounter many practical problems when developing a systematic methodology for evaluation that is adapted to the unique requirements of their educational system.

The Individualized Educational Program (IEP) required under Public Law (PL) 94-142 is one tool readily available to facilitate this objective. Gallant suggests that PL 94-142 mandates responsibilities that aid in the evaluation of practice, and she encourages school social workers to take advantage of as many dimensions of this law as are appropriate to them as individual practitioners.[1]

The primary purpose of the overall IEP is to serve as a vehicle for communication between the parents and the school. However, the Manchester, Connecticut, School Social Work Department has developed a dual function for the social work IEP, which is developed for every student placed in a school social work special education program. First, they see it as a way of conjointly developing a plan to implement the appropriate school social work service designated in this law. This includes such activities as

group and individual counseling with the child and family; working

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> with those problems in the child's living situation (home, school, and community) that affect the child's adjustment in the school; and mobilizing school and community resources to enable the child to receive maximum benefit form his or her educational program.[2]

The second function of the social work IEP is to provide a measure of the effectiveness of practice in the system.

To fulfill these functions, the department's staff first identified the most frequent reasons for school social work referral, which included problems in the categories of self-image, peer interaction, school refusal, parent-child-family relationships, communications, and adjustment-reaction behavior. Under each category, the staff developed possible annual goals as models for inclusion in the social work IEP. Then, using the system of Behavioral Characteristics Progression, which was developed as part of a special education management project in Santa Cruz County, California, they categorized a number of short-term objectives under each goal. (See Table 1.) Short-term objectives are the intermediate steps between the child's functioning level and the annual goal. Staff members are not limited to the use of these proposed model objectives in writing IEPs, but are free to develop others.

The Manchester referral procedures allow school social workers to make a diagnostic judgment about the appropriateness of school social work services for a student and to report their findings in a conference with the Planning and Placement Team. When the members of this team agree to a school social work program, they determine a need statement, an annual goal, and short-term objectives to achieve the goal. (See Table 2.) The team usually accepts the social worker's recommendations in this regard. If the student's parents are present at the conference, the negotiations are made final. In cases in which it is appropriate, the student should also be in attendance. When the parents are absent, the worker meets with them later to discuss and extend the IEP with their input. Once the parents agree to the proposed program, the worker involves the student, unless it has been possible to include the student in the conference.

In dealing with students at the secondary level, workers frequently conduct the preliminary negotiations related to the IEP with the student

TABLE 1. PROBLEMS, ANNUAL GOALS, AND SAMPLE OBJECTIVES FOR USE IN INDIVIDUALIZED EDUCATIONAL PROGRAMS

| Identified Problems | Annual Goals | Sample Short-term Objectives[a] |
|---|---|---|
| Self-image-ego function | To improve self-image.<br>To maintain positive self-image. | Volunteers personal information during class discussions. |
| Peer interaction | To learn and use peer interaction skills.<br>To improve peer interaction skills. | Accepts help from others.<br>Participates in peer-group activities volunarily. |
| School refusal | To improve attendance.<br>To improve participation in the educational program. | Verbalizes feelings in a manner acceptable to school.<br>Contributes to class discussions and activities. |
| Parent-child-family | To improve parent-child-family relationships. | Participates in developing rules of conduct and then conforms to them.<br>Displays affective behavior appropriate to the situation or place. |
| Communication problems | To identify and communicate emotions appropriately. | Verbalizes feelings appropriately.<br>Participates in conversations with teachers and peers. |
| Adjustment reaction behavior | To identify underlying problems and help home, school, or community to remedy them. | Verbalizes feelings in a manner acceptable to home, school, community.<br>Recognizes own lack of self-control and works with others to improve self. |

[a] Source: Behavioral Characteristics Progression (Palo Alto, Calif.: VORT Corp., 1973).

prior to involving the parent or the Planning and Placement Team. Whenever the final components of the IEP are concluded outside of the legally designated planning conference, the school social worker schedules an appointment with the team for approval of the completed social work IEP. Even though the signature of a parent is not legally mandated, the Manchester form allows for the signature of a parent, the worker, and the student, thus transforming the IEP into a written social work contract.[3] (See Table 2.)

The completed social work IEP is a component part of the student's total IEP. The social work staff has found that when the student and parents understand the reason for referral and the function of the school social worker, the treatment process is enhanced. Similarly,

TABLE 2. SAMPLE SCHOOL SOCIAL WORK INDIVIDUALIZED EDUCATIONAL PROGRAM

Annual Goal and Short-term Objectives for School Social Work IEP Developed on 3/2/79

Student Elizabeth School __________ School Social Worker __________

Need Statement:
Elizabeth needs to have greater confidence in her academic and social abilities so that her school performance and peer relationships improve.

Long-term Goal:
Improve self-image regarding academic success.

| Starting Date | Short-term Objectives (Worded so as to include Evaluative Criteria) | Projected Evaluation Date | School Social Work Plan | Evaluation Procedure | Date Objective Achieved |
|---|---|---|---|---|---|
| 3/2/79 | 1. Elizabeth will express positive feelings about herself. | 3/3/80 | School social work group--45 minutes per week | Observation by school social worker. | 1/14/80 |
| 3/2/79 | 2. Elizabeth will take an active part in group activities at least 50 percent of the time. | 3/3/80 | Individual casework--30 minutes per week. | Observation by school social worker and verbal feedback from teacher. | 1/14/80 |
| 3/2/79 | 3. Elizabeth's anxiety regarding verbal expression and academic performance will decrease. | 3/3/80 | | Observation by school social worker; verbal feedback from teacher and mother and father; Primary Self-Concept Inventory pre- and postests. | 1/14/80 |
| 3/2/79 | 4. Elizabeth will complete 90 percent of her work during school hours. | 3/3/80 | | Can be charted. Verbal feedback from teacher. | 1/14/80 |

Signature of school social worker responsible for goal

Signature of parent

Signature of student

when students are involved in developing the goals and objectives, the expectations are more realistic and more likely to be achieved. The Manchester department's experience supports the conclusion that a maximum degree of participation in the process by the student portends greater success, since the child's sense or self or ego is engaged.

Working out the IEP with the Planning and Placement Team makes the school social worker responsible to that interdisciplinary group as well as to the referred student and her or his parents. The fact that the

IEP includes an evaluation measure as one of its component parts further emphasizes the worker's accountability.[4] When the social work IEP is reviewed at least annually by the team as required by law, those in attendance are cognizant of the level of the worker's success in achieving the stated objectives. The social worker's service delivery comes under the close scrutiny of the consumers, who judge whether the output has been helpful or hurtful.

Departmental procedures in Manchester require the compilation of an annual statistical report by each worker to reflect the percentage of achieved objectives on each case as well as the total treatment time spent per case in consultation, casework, or group work. Thus, each worker can determine her or his own rate of success and can establish how the time spent on implementing the IEP is related to the results. This same information is available to the program supervisor, who can consider it in making recommendations for means to improve the program. At the same time, the compilation of departmental statistics incorporating the individual reports provides a systematic method for measuring the effectiveness of the department's practice.

In Manchester, approximately 94 percent of the total caseload is assigned by Planning and Placement Teams, and consequently these cases have IEPs that include objectives and evaluation measures. As special education placements, they are reviewed at least annually. In the 1978-79 school year, the staff achieved 77 percent of the stated objectives in the cases that had annual reviews during that period. Thus, the IEP has proved to be an instrument that enables the Manchester School Social Work Department to objectify its practice and to gather sufficient data to measure the annual effectiveness of its program regarding both process and product.

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# PROGRAM EVALUATION IN SCHOOL SOCIAL WORK

Alvin J. Flieder

ABSTRACT: As a type of applied research, program evaluation is seen as a means for improving school social work and its services to consumers. Concepts from program evaluation literature are identified as considerations when determining definition, rationale, participants and method of application in school social work. Practical considerations in developing and implementing a program evaluation are presented via a case example.

Program evaluation can be utilized within school social work as a process to gather information which leads to improved program planning and service delivery. It is the intent of this chapter to further develop the practical application of contemporary program evaluation for the specific practice area of school social work. This will be followed by a description of experiences acquired while implementing an initial program evaluation of an existing school social work program. It is hoped that other practitioners will be encouraged to do program evaluation, thus helping to improve services to consumers and advancing the profession as a whole.

## Recent Historical Underpinnings

Over the last three decades there has been a marked escalation of program evaluation activity in the human services. A number of factors have contributed to this progression. Following the Soviet launch of Sputnik in 1957, widespread concern arose over the effectiveness of America's education system. There were fears that our lag in missile technology reflected a more serious underlying gap in education. Combined with parental desire to improve education, these fears produced great pressure to develop more effective schools (Patton, 1986, p. 18). In order to determine what was working best, program evaluation was needed.

The 1960s brought the War on Poverty and a flood of Great Society programs emanating from the Office of Economic Opportunity. Large-scale health and mental health programs were required to include evaluation in their activities and budgets (often 1-3% of the program budget). By the 1970s these programs were confronted with economic threats (increasing taxes, rising inflation, the cost of the Vietnam War, etc.). The government, other funding sources, and the taxpaying public demanded increased program oversight, cost-benefit analysis and efficacy.

The "age of accountability" had thus begun. Patton (1986) observes that program evaluation, as a method of judging programs, was born of two lessons from this period of large-scale social experimentation and governmental intervention: (1) the realization that there is not enough money to do all the things that need doing; and (2) it takes more than money to solve complex human and social problems (p. 20). The information age of the 1980s has multiplied our ability to generate, store, retrieve, transmit and process information. The issue now is not the mere creation of information, but rather its application.

During this evolution, program evaluation has tended to emphasize program improvement, the integration of evaluators with decision makers, and the recognition that both quantitative and qualitative approaches are useful, depending upon the situation under study (McLaughlin, 1988). The increasing complexity of the information age has led to increasing selectivity--only that data which has direct utility to the stakeholders and to the program itself should be gathered and analyzed. This necessitates closer integration of evaluation and decision-making functions. In effect, the current focus on utilization is an accountability statement on evaluation itself; i.e., if evaluation is to be done with program resources, then application of the findings and evaluator accountability should be assured from the onset (Patton, 1986, pp. 12, 13, 25).

## Conceptual Considerations

### What Is Program Evaluation?

As a working definition, program evaluation is a process for systematically gathering information to determine the degree to which a program is accomplishing its purpose(s) and whether it is utilizing resources appropriately, effectively, or efficiently. In this chapter, a program will be defined as a collection of people and resources designated to work for a common purpose. A program may also be construed as an individual who provides an array of services for a designated purpose. It is important to make and maintain a clear distinction between program evaluation and personnel evaluation: program evaluation is the evaluation of a program in relation to its goals, while personnel evaluation is the evaluation of individual performance in relation to the standards of one's job functions and responsibilities.

Program evaluation can generally be viewed as an outgrowth of evaluation research. While basic research seeks to determine facts, relationships, and truth, evaluation research is more the process of making judgments of worth or appraisal of value. Procedures used to discover knowledge are similarly called upon to evaluate one's ability to apply knowledge. Thus, evaluation research is an attempt to utilize the scientific method for the purpose of assessing the "worthwhileness" of an organization's activities. The primary objective is to determine the extent to which a given program or procedure is achieving a desired result. Unlike basic research, the program evaluator must be constantly aware of the utility of findings as an aid in planning and development of the program (Suchman, 1967, pp. 20-21).

Maher and Bennett (1984) emphasize the value of evaluation in designing or modifying a program. Evaluation provides information so judgments can be made about the continued need for the program, the continued appropriateness of its goals, the strengthes or weaknesses of different development options, the manner in which the program is carried out, and the ultimate success of the effort. This information becomes the basis for program improvement (pp. 4-5).

One of the most comprehensive references to date is Patton's book, Utilization-Focused Evaluation (1986). He describes program evaluation as "the systematic collection of information about the activities, characteristics, and outcomes of programs for use by specific people to reduce uncertainties, improve effectiveness, and make decisions with regard to what those programs are doing and affecting" (p. 14). It uses research methods to gather information but differs fundamentally from basic research in the purpose of data collection: "Research is aimed at truth, while evaluation is aimed at action" (p. 14).

Program evaluation is thus a systematic, planful process whereby information is gathered in a way that facilitates judgments regarding value and efficacy of the program. It enables program planning and development. Decisions about the types and quantities of information to gather will be driven by the evaluation's purpose.

## Why Do Program Evaluation?

Decisions resulting from program evaluation will usually be better if based on systematically gathered data rather than on instinct or estimation. Program evaluation documents accountability in the achievement of program mission or objectives. It can help justify continuation of the program, assignment of additional resources, or changes in program direction. A well done and well written program evaluation report will serve as a boost to program image and to public relations; it can enhance the self-esteem and sense of accomplishment among program staff; or it may be submitted as input to periodic accreditation evaluations. These efforts are also consistent with the movement toward expanding the empirical base for school social work and social work in general, as developed by the NASW Social Policy and Practice Center and the national research networking efforts of David Kurtz and Richard Barth (Bramschreiber & Flieder, 1987).

The program evaluator must determine the purpose(s) for his or her effort early in the planning and design stages. This enhances utilization, informs staff and facilitates efficient planning as previously mentioned. Application of evaluation results can occur long after the evaluation is completed. A well documented and thorough report can be a vital reference years after its completion, should unanticipated needs arise; an initial evaluation may be used as a baseline for comparing subsequent findings.

Horvath (1985) identifies four reasons for program evaluation from the perspective of the administrator or stakeholder: (1) program improvement, (2) policy analysis, (3) accountability, and (4) public relations. Where new circumstances arise, evaluation data may be useful in policy analysis. Whatever the findings, they will likely be good for public relations--i.e., positive findings can affirm and support the program; negative findings can be used to support requests for additional funding or support for politically difficult program changes (Horvath, 1985).

Fitz-Gibbon and Morris (1978) define the two general, commonly accepted evaluation purposes in their helpful handbook How to Design a Program Evaluation. Formative evaluation aids in the development and improvement of the program. It helps to conceptualize what the program is and how it works. This provides immediate feedback to suggest refinements and determine where problems exist during the formative stages of the program. Summative evaluation views the overall impact of the program after it has passed its developmental stage and is functioning as intended. This type of evaluation reflects what the program looks like and what has been achieved. It usually leads to a judgment about whether to continue, terminate, or modify the program (pp. 9-19).

From a management standpoint, "evaluation becomes an essential part of the entire administrative process related to planning, development and operation" of a program (Suchman, 1967, p. 132). It can assist in decisions of what will be done and how it will be done. Most program evaluations in school social work, initiated by the program supervisor, will be of the formative type, i.e., the evaluation will seek recommendations for improvement, increased efficiency or solution of specific problems. However, there may be occasions when a program evaluation is imposed from outside the organization or from a higher authority within the same organization. Where there are very strong vested interests in a program, worthwhileness may be taken for granted such that examining, questioning, or challenging its underlying assumptions will generate resistance to the evaluation process. This resistance may be magnified if there is conflict between the goals and objectives of the program and the goals and objectives of the total organization (Suchman, 1967, pp. 132, 146).

The purpose of the evaluation should be clearly identified early in the planning process; likewise, what questions are to be answered and who should receive the evaluation results.

> A major reason for evaluating policies and programs is to make sure what we want to have happen actually happens.... Sincerity and caring mean that one wants to do a good job, be effective and make a difference.... People who really care about their work are

precisely the people who can benefit most from utilization - focused program evaluation (Patton, 1986, p. 16).

## Who Is Involved?

Simply stated, there are two categories of people involved in program evaluation efforts: evaluators and stakeholders. To increase the likelihood that the evaluation will be applied in harmony with program needs, evaluators need to work with program decision makers as early as the planning and designing stages. Evaluators should know the theory, design, and implementation of program evaluations as well as data measurement and analysis; report writing and presentation; and group process. In larger organizations you may find people of this description, but more often they will come from outside the immediate organization of the program under study. Sometimes referred to as "outside evaluators" or "external experts," they must be knowledgeable about the purpose of the program as well as program evaluation techniques. Evaluators should have little or no stake in the outcome beyond making the process and the product as objective and professional as possible, plus enabling the evaluation to be as useful as possible in accordance with its intended purposes.

Stakeholders are those who care about, plan, benefit from, or provide the program. They provide data for the evaluation and use, benefit or suffer from the results. McLaughlin (1988) identifies two subcategories of participants in this grouping: (1) decision makers--program administrators, board members or others who control the allocation of resources to the program, including program supervisors or others who make day-to-day decisions about the program so that it meets the intents of the administration and the needs of clients; (2) program influencers --those people who influence administrators regarding the allocation of resources, i.e., students, parents, advocates, community members or politicians.

## How Is Program Evaluation Done?

In a general sense, program evaluation from start to finish encompasses planning, implementation, and follow-up. Of these, planning may be the most important part since it greatly influences subsequent steps and the ultimate outcome. Of prime importance in this phase is specific articulation of the purpose or reason for the evaluation. The scope of the plan should accomplish what is needed and avoid over-generation of data which can result in diluting or confounding outcomes. A program evaluation design prescribes when and from whom data will be gathered during the course of the evaluation. It helps to ensure an organized, thorough study in which the right people will be doing planned activities at the pre-planned time.

Rutman and Hudson (1979) identify three major types of evaluation measures--effort (inputs), efficiency (economy), and effects (outcomes). Assessment of effort involves measurement of kinds or amounts of inputs or activities the program utilizes in pursuit of its goals. Efficiency tests the relationship between expenditure of resources (primarily time and money) with the outcomes produced. Effectiveness assesses the extent to which the program achieves its stated goals in terms of outcomes (p. 426).

Time spent planning will usually pay good dividends in the long run. The program supervisor must be mindful that an evaluation will require monetary as well as non-tangible expenditures, such as staff time. A time to implement the evaluation should be chosen carefully such that its results are needed and wanted for program improvement. There are times to avoid as well, such as peak rush periods when this would put unnecessary stress on staff and resources. Once the data is collected, it cannot be changed (Bramschreiber & Flieder, 1987).

Wholey (1979) outlines a preparatory process called "evaluability assessment," which is the formal collaboration of program managers and staff with the decision-making system regarding the questions to be answered by the evaluation process. The sequential steps in evaluability assessment are as follows:

1. Identify the primary intended users of the evaluation and determine, from their perspective, what activities and objectives make up the program under study;
2. Collect information on program activities, goals and objectives and underlying causal assumptions as can usually be found in program documents or by interviewing the staff;
3. Synthesize the information collected in a "rhetorical program model" that links resource inputs, intended activities and their impact;

4. Determine the extent to which such a program model is sufficiently clear so that evaluation is both feasible and potentially useful to intended users;

5. Present the results of analysis to program managers and intended users for reaching agreement on an evaluation plan. (Rutman & Hudson, 1979, p. 424)

Schofield and Kraetzer (1988) applied Wholey's evaluability assessment to school social work program evaluation. Their useful report suggests possible quantifiable measures which can be used to address numerous evaluation questions.

McLaughlin (1988) presents a comprehensive model of the steps in program evaluation. It begins with focusing which involves assembling a team to identify components of the program to be evaluated, designing the evaluation, and articulating its intended uses (much like Wholey's evaluability assessment outlined above). The evaluation team would be well advised to establish a management plan to guide the conduct of the study. This would include such things as a written schedule of events and a budget. These aids will help the team maintain order and completeness.

The second step is describing the program. The evaluation team describes the interactive components of the program in terms of inputs, processes and outcomes. The program description includes all the standards of the program and links program evaluation to program components. Next, the team develops evaluation questions. These should reflect stages in programming (plan, implement, operate, and complete). The types of questions may reflect program design, implementation, outcome, or cost. The fourth step is information collection. McLaughlin encourages evaluators to look for existing data collection instruments before launching out to develop new ones. The objective is to gather information that will lead to informed program change. As the evaluation proceeds, the need for immediate change may become evident. This adjustment may be made since it is not always necessary to wait until the full evaluation is completed to revise the program.

The next step is data analysis which can be field tested or run with mock data to detect potential pitfalls before they occur. After the data is analyzed someone must write the evaluation report. It is recommended that a contract be established with the outside evaluator(s) for writing the report, designating specific topics to include, and the due date. Personal experience will attest to the wisdom of having outside evaluators prepare the final written report, which is in addition to the immediate verbal report that is expected as they conclude their part in the evaluation and prepare to exit the site. Having an "executive summary" prepared is also useful--this should be limited to two pages containing only the highlights of the complete report.

Being totally committed to the concept of program evaluation, plans should allow for a meta evaluation or evaluation of the evaluation. This is accomplished by posing similar questions of the evaluation process as one would ask during a program evaluation; e.g., did the plan answer the evaluation questions? Did the benefits of the process justify the cost? What use will be made of evaluation findings? The meta evaluation occurs as each of the previous six steps in the evaluation are concluded (McLaughlin, 1988).

## Special Considerations

When the evaluation is of the formative type, efforts should be made to include as many sources of comparative information as possible in order to answer the question, "Compared to what?" In the ideal situation, a control group or time series design could be employed to discover the effects of the program being evaluated. In fact, it is a good idea to locate a control group or collect time series data as a baseline before the program begins (Fitz-Gibbon & Morris, 1978, pp. 14-15). With formative evaluations the rigor of the design can be relaxed (as compared to summative designs) since the constituency is primarily program staff. When the design is relaxed, interpretation of results must be made with appropriate caution. One function of formative evaluation is to collect differences of opinion about how the program should be designed or implemented.

Compensatory and special education programs present special problems to program evaluation. By statute identified children must be served, thus we encounter both ethical and legal difficulty in withholding treatment from control groups as a basis of comparison to identify and demonstrate effects of the program being studied. This is one point at which the controversy between quantitative and qualitative approaches will impact school social work program evaluation. Kushler and Davidson (1979) assert a strong argument in favor of using a true experimental design with randomization when evaluating social programs. This was balanced more recently by the cogent point made by Staudt and Craft (1983) that "it should be recognized that practical, political, and traditional forces at the policy-making level may have more influence on decisions than will empirical data" (p. 130).

Where control groups are not available, Fitz-Gibbon and Morris offer these design suggestions: (1) non-equivalent control groups--perform the same test in another school or area where no such program exists; (2) evaluate components of the program and compare results; (3) compare diverse programs with respect to consumer satisfaction; (4) identify factors in successful cases, then seek their presence from cases in the program being evaluated; (5) set local goals and measure goal achievement; and (6) make the evaluation theory-based, looking at those activities viewed as critical to obtaining good results given the goals of the program (1977, pp. 14-22).

Interrupted time series designs (Radin, 1979) can be an alternative in the absence of a control group. Another technique to use where control groups are unavailable is offered by McLaughlin (1988). This approach identifies rival hypotheses that would explain why the program outcomes appeared. If no rival hypothesis can be upheld, one can reasonably support the conclusion that outcomes are causally related to program inputs and activities.

## Case Study

In 1983 a program evaluation was accomplished in the School Social Work Program of the Grant Wood Area Education Agency, an intermediate education agency servicing 39 school districts over a seven county area in East-central Iowa. At that time the program was staffed by 21 M.S.W. school social workers, one program supervisor, and one program secretary. It is one of numerous disciplines providing support services in the Division of Special Education which were required by administrative directive to undergo program evaluation within a two-year period. This was our first attempt at program evaluation. We had benefit of only a fraction of the literature referred to previously in this chapter--

primarily Fitz-Gibbon and Morris (1978) and Suchman (1967). Rather than a model of contemporary program evaluation in school social work, it is being presented as an example of how one actual study was conducted. Possibly other programs will benefit from our early experiences and be encouraged to develop them for further application.

A planning committee was formed with five social work staff members and the social work supervisor. They developed a design which was supported by staff consensus and approved by the Director. The stated purpose was to conduct a formative evaluation leading to statements of current quality and recommendations for future improvement. The team developed a questionnaire based upon the job description, program description and the evaluation questions generated. One major question was: "How do consumers rank the value of our various services?" The design called for three sources of input data: school professionals (consumer evaluation), school social workers (self-evaluation), and external experts.

Consumer evaluators included four categories of school district personnel (principals, guidance counselors, special education teachers and regular education teachers) plus other support staff within the Division (school psychologists, speech clinicians, special education consultants, etc.) who were randomly sampled via the developed questionnaire. The 21 school social workers also evaluated themselves using the same questionnaire completed by consumers.

The questionnaire was fashioned so that it could be answered by any stakeholder subgroup. It consisted of: (a) 22 positively worded statements to which respondents indicated their level of agreement or disagreement on a four-point rating scale (forced choice); (b) a list of the 11 primary services provided by the agency--respondents were asked to rank these services in order of importance to them; and (c) one open-ended question seeking suggestions for improvements in the School Social Work Program. The questionnaire was mailed to consumers with a cover letter and return envelope. In cases where responses were not returned within two weeks, a follow-up mailing was accomplished. Return rates from those sampled were very high, ranging from 89% to 100% among the various respondent groups.

External experts consisted of two state department officials and two veteran school social work supervisors from other parts of the state. As a visiting team, they were free to establish their own design and methods. They were given broad latitude and support, though a set of questions and expectations was provided for them. They conducted structured interviews with all school social work staff, selected school personnel, parents, and community agency personnel. They also conducted records reviews. At the conclusion of their site visit (two and one-half days) they made a verbal report to approximately half of the school social work staff and the Division administration. The explicit understanding was that a report would be written by them and submitted within one month of their departure.

After the external experts' written report was received it was included verbatim as part of the final program evaluation report. This final report included numerous charts and graphs to summarize information in visual form as well as written form. The Appendix included copies of every document generated throughout the evaluation process, including computer printouts summarizing questionnaire data, cover letters, external experts' itinerary, narrative responses from open-ended questions, everything which might have historical or baseline value for future reference.

Our program evaluation confirmed the hypothesis of widespread value and support for school social work services among consumers. In addition, it provided a rank order of value among those services as perceived by the schools. Crisis intervention, counseling and consultation were found to have the highest value among school personnel, while reports and inservice training were of least value. It also pointed to the need to further refine the school social work service role within the purview of special education. A more narrow role was also needed in order to reduce the risk of burnout among staff. This led to the formation of a task force the following summer which more clearly defined the role and priorities of school social work services.

A two-page summary of the final report was written and has been useful in reporting to our Agency board, our new administrator, the supervisors' group, etc. We did not do a formal meta evaluation, though there was general agreement that the benefits of the program evaluation were well worth the less than $500 expenditure.

The Division and its programs will be undergoing another cycle of program evaluations to be completed by 1990. At that time we will be much more knowledgeable about how to apply program evaluation. We will start with the final report from our first experience, decide what we can use to draw comparisons with, update it according to our current evaluation questions, and make it more utilization-focused.

## Conclusion

While little has been written on the subject of program evaluation in school social work, a growing body of literature in special education and evaluation research has applicability to our specific practice area. It is reasonable to expect that program evaluation in school social work will increase under the combined influences of increasing program evaluation activity in special education, the greater accountability expectations of education in the excellence movement, and the expansion of the empirical base for social work.

Much can be learned in undertaking a program evaluation. Some is unanticipated, but usually can be turned to the advantage of programs, staff, and consumers. Based upon our first experience at Grant Wood Area Education Agency, we would recommend and encourage that other school social work programs take the opportunity for self-improvement which results from such an endeavor.

## ABOUT THE AUTHOR

Al Flieder, ACSW, LSW, has been involved in the practice of school social work in Iowa since 1975. He is currently supervisor of the School Social Work Program at Grant Wood Area Education Agency in Cedar Rapids, Iowa. Since receiving his MSW from the University of Minnesota he has published and presented on various subjects relating to the practice of school social work. He has been active in the Iowa School Social Work Association, the Midwest School Social Work Council and recently completed a two-year appointment to the NASW Commission on Education.

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# CONTENT ANALYSIS: IT DOES HAVE A A PLACE IN SOCIAL WORK RESEARCH*

Paula Allen-Meares

ABSTRACT: Content analysis is presented as a research technique that social work researchers and practitioners can use to study developments and trends in social work practice, the status of social work knowledge building, the redirection of relevant policies, and accountability procedures in social service agencies. Methodological issues such as developing categories, defining the unit of analysis, sampling, and determining reliability and validity, are described and evaluated. It is concluded that content analysis provides a common basis for researchers and practitioners to document the processes and outcomes of the profession.

## INTRODUCTION

Content analysis is a research technique and clinical tool useful to social work. The potential of this method is great because it can be used to study developments and trends in social work practice, the status of social work knowledge building, the redirection of relevant social welfare policies, and accountability procedures in social service agencies. This article identifies some of the major methodological considerations that evolve during its application.

### Definition and Characteristics

"Content analysis is a technique for making inferences by systematically and objectively identifying specified characteristics of messages" (Holsti, 1979, p. 601). Berelson (1952) and Kaplan and Goldsen (1964) defined it much more specifically. Berelson stated, "Content analysis is a research technique for the objective, systematic, and quantitative description of manifest content" (p. 18). According to Kaplan and Goldsen, "The content analysis aims at quantitative classification of a given body of content in terms of a system of categories derived to yield data relevant to specific hypotheses concerning content" (p. 25).

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Regardless of different emphases, content analysis is an objective coding of communication messages developed to yield data relevant to specific hypotheses concerning content or research questions (Carney, 1972). One could use content analysis to analyze the recorded interactions of social work students before and after a training program in order to evaluate the efficacy of the training. A central question might be: "Did students who participated in the training use more reflective listening statements after training?" Content analysis might also be used to study social work texts: "Do recent texts present gays and lesbians in a more positive context than older texts? Are blacks more likely than women and other minority groups to be presented in a negative context in social work texts?"

Objectivity requiries that the analysis be carried out on the basis of explicitly formulated rules that enable others to obtain the same data. The second criterion, inclusion and exclusion of content into categories, is determined in accordance with consistently applied criteria of selection. This is essential for assuring a non-biased selection of the content by the researcher. Quantitativeness is the third important criterion common to the definitions. Content analysis aims to place specific units of content into precise categories. For example, the occurrence and kinds of themes in a casework record can be categorized and counted over time, and presented as "frequencies," "more often," and "increases," etc.

Some definitions recognize qualitative content analysis--much of it quasi-quantitative. Qualitative analysis employs a less rigorous procedure of counting. Also, less formalized categories are employed and it is usually conducted on a small or incomplete sample. Very often, the content under study may contain a higher ratio of non-content to content statements than quantitative. Also, there is relatively less concern with the content per se, than with the content as a reflection of deeper phenomena. When a high degree of precision, objectivity, and accuracy is required, quantitative analysis should be employed.

### Uses in Social Work

Content analysis is useful for determining trends or patterns in communication; tracing the development of scholarship; identifying variables in decision-making; inferring cultural change, values, and interests of different groups; and identifying the recipient and the origin of the message (see Pool, 1959; Budd, 1967; Holsti, 1971). It can be applied to written documents, which include books, articles, case records, tape recording transcripts, summaries of meetings, and logs of a social worker's activities (see Dollard, 1947; Reid and Shyne, 1969; Hollis, 1972; Shayne, 1975; Thomas, 1975, Tripodi and Epstein, 1980). Also, several social work dissertations have drawn upon content analysis as a primary research technique (Boldi, 1971; Moss, 1972; Fatout, 1975; Abott, 1977; Hinchman, 1977, Yoder, 1980).

In social work practice, Tripodi and Epstein (1980) argue that the technique can be used to analyze and monitor a clinical social worker's performance as she/he implements treatment in accordance with treatment planning and agency policy; to identify problematic/common themes that emerge during the early phase of worker-client contact; and to evaluate the success of treatment, specifically to identify a decrease in the number of themes a particular problem is mentioned by the client as the treatment evolves. They maintain that it is valuable for clinical supervision. Supervisors could more systematically and objectively evaluate the interactions between client and worker using the process records. Also, the principles of content analysis applied to case records could enhance the validity and reliability of the inferences drawn from them (Hunt, 1952; Auld, 1955; Psathas, 1966).

Taber and Shapiro (1965) used a structured schedule to determine the proportion of empirical content in a sample of articles. Their analysis was quantified in two ways: by measurement of number of column inches and by a count of types of references. They sought answers to such questions as: How have social work writers contributed to knowledge? What is the status of knowledge building in social work?

Another illustration of the method involved an analysis of journal articles in social work over a ten year period (Meares and Lane, 1982). This study found several important shifts in services. A broader conception of practice was found in the period comprising the later five years, with a focus on pupil groups and the mezzosystem level. Trends reflected a move away from the direct service model and toward a more indirect approach.

## METHODOLOGICAL CONSIDERATIONS

There are a number of important methodological considerations in the application of this technique. How stringently the analyst pursues each is dependent upon a number of factors (e.g., the level of understanding sought, the intended use of the data). A practitioner may want to discover the problematic themes in the interactions between husband and wife during the initial phase of treatment. This may merely involve a cursory review of tapes or records, without developing highly sophisticated categories and concern for generalizability. However, in the Taber and Shapiro (1965) study, the issues of reliability, and the refinement of categories, were necessary requirements if the findings were to be taken as valid.

According to Holsti (1971) an analyst must complete the following steps: develop categories in which to place the data; determine what unit of analysis will be used (e.g., the character, the word, themes, the whole natural unit such as space and time measures, or the physical division of material); select what content unit will be used (the largest body of content that can be examined in characterizing a recording unit such as an article, book, paragraph, or a grammatical unit); determine the universe or population and its nature for sampling purposes; insure reliability among coders if several are used to categorize the data; and guarantee validity (do the categories measure what they intend to measure?).

### Category Development

Critical to obtaining an objective and systematic account of content, is having clearly formulated categories into which the data can be placed. If the categories are not well thought out, then the content analysis is questionable. Categories can be subject-focused, and they may reflect the pro or con treatment of a subject matter. For example, what is the communication about--abused children, exceptional children, or neglected children? What policies are being advocated? The origin or the source of the communication may be the focus. For example, the professional identify of the communicator could be a social work educator, practitioner, or a non-social work professional. Categories can also reflect the target of the communication, or values, methods, and traits. For example, to whom the message is intended, and what are the characteristics of the message? Are social work practitioners the target of the message? Does the message suggest or urge specific changes in practice, or knowledge building?

Content analysis can be undertaken only when the problem under consideration can be formulated as a worthwhile hypothesis that establishes the categories to be studied. The development of categories requires the analyst to work closely with the material under investigation, moving back and forth from the content to the categories, defining and redefining the indicators (Holsti, 1971). The indicators evolve from the hypotheses or questions, which in turn, assist in category development. For example, the analyst may believe that certain social work tasks are recommended in the literature. He/she then develops tentative categories that reflect current theory or knowledge. Of course, there is some preliminary review of the content. These categories are later expanded and modified, and rules to govern the inclusion of content into specific categories are developed.

The analyst is concerned with whether the hypotheses or research questions adequately express the problem; whether the categories adequately express the hypotheses/questions; and whether the indicators adequately express the categories. The analyst should pre-test the usefulness of the categories on the content, modifying them as new insights are acquired (Holsti, 1971).

"A content analyst can be no better than its system of categories" (Holsti, p. 644). The categories should be exhaustive and mutually exclusive. No one item can be scored more than once within a category. The analyst develops rules that can be used to determine boundaries of the various categories and what kind of information belongs in each. For example, a field instructor may want to compare the intervention behaviors of several different students in their recorded interviews. By reviewing interviews she would obtain a general sense of student behaviors. Given her a priori knowledge about the kinds of intervention behavior, and her central area of concern, she would proceed to develop tentative categories that had behavioral referents. These categories would be modified as new insights evolved (see Tripodi and Epstein, p. 116).

### Unit of Analysis

In addition to defining the categories into which content data may be classified, the analyst must designate the size of the units to be coded. The initial step is to define the recording unit, the specific segment of content that is characterized by placing it in a given category (Holsti, p. 647). Several different recording units may be used, e.g., the single word; the theme; the character; the paragraph, sentence, or other grammatical unit; and the item (film, book, entire article).

The context unit is the largest body of content that may be searched to characterize a recording unit. The coder may be instructed to refer to the sentence, the paragraph, or the article to determine, for example, the attitude of the social work profession in regard to child abuse and abortion. The selection of the recording unit is generally based upon which units best meet the requirements of the research problem, and which units will give satisfactory results with the least expenditure of resources (Holsti, p. 648). For example, in the previous illustration of the field instructor interested in the kind of student intervention behaviors the entire recorded interview becomes the recording unit and could also serve as the unit of enumeration. She could classify each interview by the intervention used most often by the different students. In this illustration, it would be unwise for the analyst to only review every other paragraph within an interview or to count them. Important data would be lost by using a unit of analysis that is too small for the research question. The selection of a recording unit is based upon how fine are the discrimination desired to satisfy requirements of the study.

The recording unit must be appropriate and sufficient in size to guarantee the appearance of the message or content under study. For example, in the Taber and Shapiro (1965) study, data were qualified in two ways: by measurement of column inches, and by a count of reference types for each article reviewed. Weinberg (1982) used a different recording unit. She analyzed the individual autobiographical works of disabled persons from beginning to end, identifying sections that described the author's early childhood. Childhood was then defined as birth through age 10. Those sections of each book that deal with early childhood, and all sentences and paragraphs that involved discussion of the individual's disability, were abstracted and put on index cards. Each idea or discrete childhood incident was placed on a single card. All cards from the various authors were then sorted and grouped by common experiences (p. 221). Counting of column inches of each autobiography would have been inappropriate to answer Weinberg's concerns.

The content analysts must also choose the unit of enumeration, that is, the unit in terms of the quantification to be performed. The recording unit and the unit of enumeration may be identical as in the previous illustration of the field instructor. An important aspect of the investigator's choice, however, is that each system of measurement has a set of assumptions on the nature of the data and the inferences that may be drawn. For example, one can measure space or count column inches as Taber and Shapiro (1965) did; or one can determine the frequency of an idea in the content or the intensity of given statements. The analyst should be aware of the advantages of a specific recording unit.

For example, an entire article may be read (as context unit) and then categorized (recording unit) into whether it supports a particular approach to social work knowledge building. Thus, the article becomes the recording and context unit. As the size of the context unit increases, the number of neutral evaluations decreases significantly (Krippendorff, p. 59). However, if one wanted to know the specific intervention strategies that are contained in the approaches, a smaller unit of analysis within each article would be standardized and applied to every article. This latter procedure may prove to be more time consuming but would yield a more discriminating analysis.

## Sampling

A brief discussion of sampling issues is possible here. A review of the content analysis literature revealed that the sort of sampling issues of concern in other types of social work research are also of concern in content analysis. The researcher must define the universe to be reviewed, from which a sample can be drawn (see Holsti, p. 454 and Krippendorff, 1980). This may not always be possible. Regardless, the analysis must develop criteria for determining what is the universe, its size, and its characteristics. Once the universe of the communication is defined, the analyst then may make as many as three decisions: What sources of communication will be selected? Which documents will be included in the sample? Should sampling occur within documents? Each decision requires criteria to be developed to ensure that the analyst's selection is non-biased.

There are several types of sampling schemes. Whatever scheme the researcher selects, a chief aim is to yield a sample that is representative of the content under study. The specific procedure used to identify the sample should be justified. Random, stratified, systematic, cluster, multistage, and varying probability sampling procedures are described in the writings of Krippendorff (1980). Each sampling procedure requires that the researcher have specific knowledge about the content under study.

For instance, if the researcher adopts stratified sampling, (distinct sub-populations within a population or strata are identified, and then random selections are carried out in each stratum), the resulting sample reflects a priori distinctions known to exist within the population. For example, journals can be stratified on the basis of frequency of publication, size of readership, or audience composition. Systematic sampling, on the other hand, is favored when data stem from regularly appearing publications or a stringlike order of writings, such as films and articles. Cluster sampling (uses groups and subgroups of elements as sampling units) is a practical approach when the researcher cannot list the elements in the population (as opposed to listing the groups in which they occur). A modification of cluster sampling is multistage sampling (samples are drawn using one or more sampling procedures in succession). Varying probability sampling (assigns probabilities of inclusion in a sample to each unit according to some a priori criterion) is important in content analysis because of the commitment to making inferences about phenomena not included in the sample. In actuality it represents the statistical "knowledge a researcher has about the context of the data" (Krippendorf, p. 68).

Sometimes the universe is so small that all units of the population must be analyzed, as was the case in Meares and Lane (1982). Several steps and criteria were developed for purposes of identifying the universe. The first step was the designation of the journals (universe) from which articles were to be selected. Four journals, Social Service Review, Child Welfare, Social Work, and Social Casework, were selected according to the following criteria:

1. The journals were national in scope, i.e, both for audience and contributors.
2. The journals were generally considered to be the major journals of social work and to reflect the major trends of thought in the various areas of social work.
3. The journals had been used in previous content analysis studies (e.g., Taber and Shapiro, 1965; Weinberg and Tripodi, 1969).
4. The journals covered the ten-year period from 1968 to 1978.
5. The journals did not represent any one area of specialization in social work and therefore reflected the general, major trends in the various areas of social work.

The second step consisted of creating a comprehensive list of all relevant articles. This was accomplished by surveying the cumulative yearly index of each volume of the journals, using key words, such as "school social work," "schools," "learning," "education," "children," "adolescents," and "family" to identify and list the titles of all articles that appeared to be relevant to the field of practice.

After the entire list was completed, each article was reviewed individually to determine if it should be included in the population. Articles were automatically included if they met any of the following criteria:

1. The article was listed under "school social work" in the index.
2. The article's title indicated that words "school social work" or the equivalent.
3. The article's abstract indicated the article's focus to be on

school social work or to include school social workers.

4. The content of the article contained a clearly identifiable discussion of school social work.

As stated previously, a real dilemma in executing a sampling plan in "conducting content analysis is making certain that the process yields a sample from which generalizations can safely be made" (Krippendorff, p. 69). Justification of a sampling plan is generally more difficult in content analysis than in survey research. In content analysis the data are not the object of attention, but they represent the steppingstone to the central interest (see Krippendorff, p. 69). There is always the possibility that the analyst may have only selective amounts of material at his disposal.

In general, a sampling plan has to cope with a large number of irregularities--for example, some of the back issues of a journal turn out to be missing. In order to ensure that the sampling plan is free from biases, a special effort must be made to obtain the missing data. If data cannot be located, the analyst might replace them with other units. Moreover, the sampling plan and procedure must be explicit so that others can replicate the process and obtain the same results.

## Reliability

A crucial issue is the computation of an index of intercoder reliability. If the analyst has a large amount of material to analyze he or she may elicit the assistance of coders. Of importance is the minimization of the analyst's subjectivity to obtain an objective description of the content. The coders must agree upon the boundaries of the material to be coded, the same results should be produced when the same categories are applied to the same content at different times.

If several coders are used, reliability must be established as consistency among coders, and reliability must be maintained through the duration of the study (Maas and Polansky, 1960, p. 134; and Spiegelman, Terwillger, and Fearing; 1953, p. 175). Threats to reliability originate from the code or coding instrument that contains the predetermined categories into which the content units are to be classified, or the coders (Funkhouser and Parker, 1966).

Spiegelman et al. (1953) indicated that the index of consistency of agreement among judges is dependent upon the degree of ambiguity of the stimulus (content) material, the degree of ambiguity of the categories and criteria, and the frames of reference, specific skills, and insights of the judges as related to a specific judging situation (p. 176). If the categories are not clearly and adequately defined, the coders will undoubtedly misclassify the content. The refinement of categories and the development of detailed rules of classification to govern the categorization process, along with coder training, should result in a higher reliability coefficient. Errors that result from a defective code (i.e., ambiguous, inexhaustive, poorly defined, over-lapping, etc.) generally appear scattered about the range of possible disagreements, while the errors originating through the coders tend to fall into systematic patterns (Funkhouser and Parker, 1966, p.3).

For example, if one were developing categories to classify the content of articles published in select social work journals--specifically on handicapped children--the development and refinement of specific categories of children would be warranted. For example, one may proceed to develop subgroups of categories under this major heading--learning disabled, educable mentally handicapped, and emotionally/behavioral disturbed, etc. An explanation of each subgroup, along with specific indicators and descriptive profile could be provided to coders to guide the analysis.

Ambiguity and coder skills are considered important factors in the total coding error (Scott, 1955). Although Spiegelman et al. (1953) indicated that the ambiguity found in categories may be a more important factor than certain types of precoding training in obtaining high reliabilty, Holsti (1971) argued that training of some form is usually required and can significantly increase intercoder agreement.

The most significant threats to reliability are those that originate within the coding instrument (Maas and Polansky, 1960, p. 134). To a large extent the reliability of classification procedures is a function of category definition and the types and numbers of discriminations to be made (Holsti, 1971). The degree to which the categories and criteria for the categories are unambiguous, the higher will be the reliability of the code. Therefore, "designative" categories and criteria provide for a higher agreement rate and reliability index than more "appraisive" types of categories, such as thematic analysis (Spiegelman et al., 1953, pp. 176-7). Thus, the development of categories must not be a predetermined, rigid process, but rather, a flexible process that develops as the project unfolds. Categories should never be fixed before the researcher has tried to train coders, primarily because in the process of training these observers to be consistent, the researcher's own operational definitions will become clarified and more precise (Maas and Polansky, 1960, pp. 134-5).

Testing of categories on a sample of the material to be analyzed enables the investigator to determine which categories require additional refinement. Reconstructing and redefining the categories by making them dichotomous, by defining them exhaustively, or by aggregating categories that make unnecessarily fine discriminations, can improve the reliability (Holsti, 1971, p. 658; Funkhouser and Parker, 1966, p. 3). If the low reliability appears to be the product of the coders the analyst may seek to improve the situation by adding or subtracting coders, or by providing the coders with more extensive training (Holsti, 1971, pp. 658; Funkhouser and Parker, 1966, p. 3) (see Table 1).

For example, two coders are asked to independently classify a series of ten client self-statements drawn from an interview. According to criteria on which received training, the coders classified each statement as indicative of "1" = a positive attitude toward self, or "0" = a neutral or negative attitude toward self. Table 1 illustrates intercoder reliability of 70% for the first reliability check. However with additional training and criteria to assist in judging they obtained a final reliability of 90%.

Table 1
Illustration of Intercoder Reliability
First Reliability Check

| Self Statement[a] | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Coder 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Coder 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |

(7 out of 10 agreements or 70%)

Final Reliability Check

| Self Statement[a] | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Coder 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |
| Coder 2 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |

(9 out of 10 agreements or 90%)

[a] "1" indicates a positive attitude and "0" indicates a neutral or negative attitude toward self.

Indexes of Reliability

Levels of acceptable reliability vary greatly. The accepted level of reliability is in the high 70's (75 or above) or the 80's (Maas and Polansky, 1960, p. 137). Funkhouser and Parker (1966) suggest that well trained coders using well constructed codes should be able to maintain a reasonably high level (greater than 85%) of reliability in a coding operation. According to Krippendorff (1981), standards of reliability must be related to validity requirements imposed upon the research results, in other words, cost of drawing the wrong inferences.

Scott (1955, p. 322) indicates that Po, or percentage of judgments on which coders agree out of the total number of judgments, is the commonly used reliability index. Maas and Polansky (1960, p. 137) indicate that reliability of data using two coders can be measured by a percentage agreement score calculated as:

$$\text{percentage agreement} = \frac{2 \times \text{number of agreements}}{\begin{array}{c}\text{total number of observations}\\ \text{recorded by both observers}\end{array}}$$

Spiegelman et al. (1953, p. 178) describe the general approach to reliability to be the computation of the number of possible agreements with N judges and N decisions and then report a percentage of agreement; however, they further indicate that once this index is obtained there is no means by which one can determine how satisfactory the index is in terms of real significance.

A critical disadvantage of these methods is that percentage agreement is not an adequate measure of reliability because it does not take into account the extent of intercoder agreement which may result from chance. Also this method is biased in favor of coding schemes with a small number of categories (see Holsti, 1970, p. 660). An attempt to correct the disadvantages of these methods by using an index that takes into account the number of categories in the coding schemes is:

$$S = \text{index of consistency} = \frac{k}{k-1} \quad \frac{(P_O-(1)^N}{k}$$

Where $P_O$ is the observed percentage agreement between two independent coders and k is the number of categories (Scott, 1955, p. 322). This method has obvious spurious effects due to the unwarranted assumption that all categories have equal probability of use by both coders.

Schutz (1968) offered another approach, the dichotomous decision method. Judges are instructed to make a series of dichotomous descriptions proceeding from gross to fine distinctions, and reliability is reported in terms of a ratio between the obtained agreement and possible agreement for each decision. Not all forms of content analysis lend themselves in this format.

There are other indexes of reliability that have some functional value when multicoders and multidecisions are required. The method described by Spiegelman, et al. (1963) is one. This method obtained reliability for an entire category set. It involves ranking the patterns of agreement among the judges on each item in a category set and reports the reliability of the category as the mean rank order of all items in that category set. According to Spiegelman et al. the advantages of this procedure include: (1) the method is empirically close to actual agreements and it can be applied to an entire category set; and (2) it is independent of the number of items judged or the number of categories from which to choose (pp. 180-1).

Another method of calculating reliability described in the literature is Scott's (1955) Pi. Scott's Pi corrects for the number of categories in the code, and the frequency with which each is used. The method requires that the categories be mutually exclusive and that the observations be duplicated on a random sample of the total set of responses being studied. It produces a score that varies from 0.00 to 1.00 (Scott, 1955, p. 321, 323). Scott's index produces a conservative estimate of reliability and appears to be a useful index. Holsti (1971,

p. 660) and Funkhouser and Parker (1966, p. 2) indicate that "Scott's formula gives the most stringent test of coding reliability currently available. Even in the case of interval data whose coding accuracy may be checked by correlational methoas, the Scott Pi provides more certainty of the correlation between two coders' work than does a correctional approach measure the extent of coder agreement." Scott suggests that for equal-interval scales the Pearson's product moment correlation coefficient be used, and, for unknown intervals, a rank difference correlation be used.

Scott's formula is as follows:

$$\P = \frac{Po - Pe}{1 - Pe} n$$

Where Po (observed percentage agreement) represents the percentage of judgments on which the two analysts agree when coding the same data independently, and, Pe is the recent agreement to be expected on the basis of chance. Scott states that ¶ is the ratio of the actual difference between obtained and chance agreement to the maximum difference between obtained and chance agreement; and he states that it can roughly be interpreted as the extent to which the coding reliability exceeds chance (Scott, 1955, p. 232).

Scott's Pi, as the preferred index for intercoder agreement, corrects for the number of categories in the code and for the frequency with which they are used. However, aside from the methodological and conceptual problems in providing an estimate of Pi, the index is not useful for researchers who wish to pinpoint the source of disagreement as being due to the code or coders.

A third index of reliability, which does locate the source of disagreement, is the random-systematic error coefficient or RSE (Funkhouser and Parker, 1966). Funkhouser and Parker found that the errors in coding that originate in the coders tend to fall into systematic patterns; thus by identifying the random or systematic nature of the coding errors the researcher can speculate as to the source of low reliability (Holsti, 1971, p. 660). RSE gives the most information. If one is seriously concerned about pinpointing whether low reliability stems from the code, coder, or the categories, RSE should be used. If the problem is in the code, then the analyst can redefine. If low reliability is attributed to the coders, then additional training may be warranted. Three indexes of reliability are obtained, and there are two approaches to an RSE analysis.

An indepth discussion of the indexes and approaches to RSE is beyond the scope of this article. Those interested in the specific details should review Funkhouser and Parker (1966). Without question, application of the RSE formula and its procedural steps is cumbersome but informative.

Cohen (1960) also offers a coefficient to measure the degree of agreement in nominal scales. It provides a means of testing hypotheses and setting confidence limits for this coefficient. His coefficient of inter-coder agreement is:

$$\text{Kappa} = k = \frac{po-pc}{1-pc}$$

po = the proportion of units in which the judges agree

pc = the proportion of units for which agreement is expected by chance

po-pc = represents the proportion of cases in which beyond chance agreement occurred

The test of agreement comes then with regard to the 1-pc of the units for which the hypothesis of no association would predict disagreement between the judges (p. 39).

## Validity

Holsti (1970) and Krippendorff (1981) make a distinction between internal validity and external validity. Internal validity essentially refers to reliability; external validity "assesses the degree to which variations inside the process of analysis correspond to variations outside that process and whether findings represent the real phenomena in the context of data as claimed" (Krippendorff, p. 156). In the past, analysts have been relaxed about validating the results, relying primarily upon content or face validity, which may be sufficient for descriptive studies, but content validity is not adequate for predicting the occurrence of future events. The validity of any study is inextricably interrelated with its sampling design and reliability.

Krippendorff (1981) and Holsti (1971) carefully address the issue of validity and identify the specific kinds of research concerns and processes that lead to different validity requirements. Predictive, construct, concurrent, sampling, correlational, and semantical are some of the approaches to validity discussed in their work. As content analysis has evolved, insufficient attention has been given to validity.

## SUMMARY AND CONCLUSION

In summary, there are a number of methodological challenges involved in conducting a content analysis. This brief review of the literature has highlighted some of these challenges. Similar to other research, insight into what one is investigating, and a clear focus are critical to planning and executing the method.

In a recent review, Smith (1982) identified a number of important areas of social work in which content analysis can be utilized. She suggested that, of all potential uses, the greatest priority is the study of intervention processes. The focus of this effort would be discovering what social workers actually do when they are providing services. This recommendation is similar to that of Tripodi and Epstein (1980). Further, Smith (1982) includes additional questions of importance--What uniform elements run throughout practice by social workers in different settings at different levels of intervention? What reliable criteria can be developed to discriminate between different levels of skills in practice (p. 9)? This line of research questions would contribute both to knowledge building in social work and to social work practice. To obtain answers to these questions it may be necessary to view content analysis as one step in a series of research procedures. For example, one may want to use interviews, direct observation, and participant observation to supplement a content analysis of practice records. One may also want to analyze correspondence preceding treatment modalities to shed light on out-reach efforts. And certainly the results of treatment are as important as the process of treatment. However, one should not restrict content analysis to the process of social work or its outcome. It can benefit every aspect of the profession as research questions and illustrations throughout this article suggest.

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# APPLICATIONS OF CONTENT ANALYSIS TO SOCIAL WORK PRACTICE IN SCHOOLS

Paula Allen-Meares

As the preceding chapter indicates, content analysis as a research technique has much to offer the practitioner-researcher and to social work researchers in general. However, certain questions could still remain for some readers: How could this research technique be incorporated into the daily practice of social work in schools? and, How will it enhance accountability and feedback?

The reader needs to keep in mind that content analysis can be a highly objective and rigorous process requiring one to include specific themes, topics, etc., given a set of rules concerning what is to be included in the counting process. It can also become a quasi-qualitative process, a less rigorous procedure with a reduced concern for a high degree of precision, objectivity, and accuracy. Whether the practitioner selects one approach over another is dependent upon the level of inquiry and the intended use of the data to be yielded by the process (Allen-Meares, 1984).

Content analysis is useful for a great variety of tasks: determining trends of patterns of communication; tracing developments; identifying variables in decision-making; inferring cultural change, values, and interests of different groups; and identifying the recipient and the origin of the message. It can be applied to case or clinical records, agency logbooks, a variety of school records (e.g., suspension, expulsion, and attendance), individual educational programs, articles found in professional journals, case summaries, and school board minutes. As stated, one can discover a change in trend regarding a specific topic over time, or new themes. For example, before the passage of P.L. 94-142 (The Education for All Handicapped Children Act), one could find in the literature discussions of different groups of pupils needing special educational services. Since its enactment, the literature has broadened in scope, and topics and issues often associated with P.L. 94-142 are published more frequently.

## Applications in Social Work Practice in Schools

Content analysis has been applied to literature specific to school social work (Allen-Meares & Lane, 1982). An analysis of journal articles, given a set of criteria and procedures for selecting and analyzing them, found that school social work when divided into two time periods (1968-1972 and 1973-1978) had moved away from the direct service model and toward a more indirect approach emphasizing liaison activity. In addition, the focus of the service was on pupil groups, such as special education populations.

Another illustration of the usefulness of content analysis would be a study of written referrals made by educational staff to the school social worker within a specific time period. The worker could develop categories for classifying these referrals and then analyze these documents for the following information: source of referral (whether it comes from a teacher, parent, or administrator); description of the presenting issue/problem the pupil is described as having; sex and racial background of the pupil; socioeconomic background including the geographic area where the child lives; and actions taken by the teacher and others to assist the child. The worker could collect other opinions from parents and the pupil and apply the same categories to ascertain congruency or incongruency in perceptions about the pupil's problems.

Content analysis could also be applied to Individual Educational Programs (IEPs) over a period of time. Through an analysis of IEPs the school social work practitioner could learn about: services unavailable in the school and community, but needed by various handicapped pupils; services frequently provided by related service personnel; or tasks school social workers perform for specific handicapped pupil groups (e.g., group work to build self-concept, referrals to community-based programs, work with parents groups to facilitate their understanding of handicapping conditions, etc.).

When providing social casework services to pupils and their families the practitioner could apply content analysis to case summaries to identify problemmatic themes that were stated frequently by the clients in the early phase of the process and that decreased in frequency as the process moved along. In this manner, content analysis becomes a tool for documenting change and growth.

Another worthwhile application requires practitioners to maintain a daily log book of their professional activities and conduct a content analysis from data gathered over a period of several months. This information is most useful for shedding light on the primary tasks and functions of the practitioners and how their time is spent.

It can also be valuable to conduct a content analysis of video tapes of pupils involved in structured activities or in a small group process. Such an analysis could reveal when a specific pupil is on- or off-task, as well as the pupil's reactions to the teacher's or group leader's intervention or activities.

In summary, content analysis offers unlimited possibilities to explore a variety of practice concerns.

## ABOUT THE AUTHOR

Paula Allen-Meares is presently an associate professor at the School of Social Work, University of Illinois, Urbana. She has published many articles and books on various aspects of school social work and pupil groups. She has served as the Chair of the NASW, Practice Advancement Council on School Social Work. Also, she has given lectures on this topic in the United States and Europe.

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# Qualitative research as a perspective

**Roy A. Ruckdeschel**

**Qualitative research shares many assumptions with contemporary practice. The author argues that viewing it as a perspective rather than a methodology emphasizes the context-sensitive and interactive orientation of this approach and thus enhances its utility to practitioners. This article presents the five core elements of the qualitative perspective and discusses their implications.**

Qualitative research studies social phenomena in the natural context in which they occur and renders behavior and context in a rich and densely detailed fashion. The term "qualitative research" has gained acceptance as the phrase that covers the various qualitative methodologies, such as participant observation, ethnography, ethnomethodology, naturalistic research, field research, and phenomenological research. Qualitative research methods have a long-standing tradition in the social sciences and are currently undergoing a revival in popularity.

The author finds it useful to view qualitative research as a perspective rather than simply as a methodology. For this reason, the approach is termed the "qualitative perspective." There is, as Denzin observed, a strong relationship between researchers' social theories or world views and their methodological preferences.[1] Moreover, neither part of the equation should be a constant; both should be open to continuous reflection and debate.[2] Research, then, is part of a dialectical process rather than a tool to be used as necessary.

## WHY QUALITATIVE METHODS?

Social work's interest in qualitative methods has been fueled by those who have been critical of traditional quantitative research methods and have sought an alternative to those methods. Social work writers have raised probing questions about the epistemological foundation of quantitative research and the relevance of that epistemology to contemporary practice.[3] A number of writers have claimed that an overreliance on quantitative methods has restricted the utility of social work research and limited the types of issues studied.[4] Although critics of quantitative methods have been far from united on what they have advocated, they frequently have counterposed qualitative methods to quantitative methods, causing the qualitative approach to emerge as a leading alternative or supplement, depending on one's point of view.

The distinction between qualitative and quantitative methods is a matter of debate among social scientists and social work researchers. Some see the qualitative-versus-quantitative framing of the issue as unproductive and instead stress a continuum of research models that differ by function and purpose rather than by epistemology.[5] Others emphasize the different epistemological premises of qualitative and quantitative methods and find it conceptually useful to maintain a sharp distinction between the two.[6]

This article recognizes that there are

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various positions on the relationship of qualitative methods to quantitative methods. Its intent is not to resolve this dilemma but simply to acknowledge its existence and, more fundamentally, to argue for qualitative research as a scientifically valid methodology that has great potential in the human services.

The attraction of qualitative methods in the applied fields such as social work has many roots. One root has already been alluded to, namely, that practitioners who view themselves in humanistic terms implicitly reject the utility of quantifying human behavior. For such practitioners, quantification is allied with a mechanistic view of society and of human behavior. They might well argue that they chose social work as a profession precisely because it is humanistic and value based. Thus, at one level, qualitative research may appeal to practitioners simply because it is not quantitative research.

Although understandable, this is a naive view of qualitative methods and one fraught with difficulty. It implies that qualitative methods are loose, unfocused, and lack discipline and rigor. Bluntly speaking, it conjures up the image of qualitative research as something anyone can do and that does not require any particular training or skills.

Such a view of qualitative research is, in large part, incorrect. Qualitative research, to be sure, is humanistic, but it also requires enormous discipline and considerable time and effort. It requires a concern with rigor and with issues of reliability and validity, although these issues must be reframed from their function in quantitative research. Furthermore, qualitative research is best done by someone well versed in both qualitative and quantitative techniques. In short, those seeking a tender-minded, easily learned approach to the study of human behavior and its relevance to the human sciences had best turn elsewhere.

What qualitative research affirms is of greater interest than what it rejects. Its affirmation of certain principles and the power of the data it obtains are the primary attraction and utility of qualitative research for social work and the human services. It is a disciplined, rigorous approach to the study of the social world. Yet it is also humanistic and consistent with the dominant contemporary models of practice. It is a model that relates to and is useful in understanding the life world of practitioners and the context in which they operate. In describing the complex, textured, and ambiguous nature of practice in organizational systems, qualitative, natural-language research techniques may even be more effective and powerful than quantitative techniques.[7]

## WHY THE QUALITATIVE PERSPECTIVE?

The qualitative perspective outlined here is built around a set of assumptions about human behavior—a social theory—and a corresponding set of techniques for gathering data about that behavior. In the perspective, the social theory and the methodology stand in dialectical relationship to each other.

A second and equally important reason for viewing qualitative research as a perspective rather than a method is that this process is informed by the author's status as a social worker. As social workers, we must be concerned with issues of application and utility. Practitioners who use qualitative methods do so for a purpose, not just for understanding for understanding's sake. This sense of purpose shapes their view and use of qualitative methods.

Furthermore, the qualitative perspective assumes that practice and the emerging practice models, such as family therapy, communications theory, and social development, embody assumptions about human behavior that are similar to those that underlie qualitative research. The qualitative perspective incorporates the belief that contemporary practice is strongly contextual and normative.

As the term "qualitative perspective" suggests, the approach attempts to synthesize social theory, practice, and research, using research as the lead system. Accordingly, it emphasizes the linkages between research and practice, rather than viewing them as separate enterprises.

## METHODOLOGICAL IMPLICATIONS

Five core elements underlie most qualitative methods and are the essence of the qualitative perspective:

- People are essentially interpretative and symbol constructing.
- Knowledge is gained most directly by the process of participation and involvement.
- Reality is multilayered and multiperspectual.
- Perception and behavior are strongly influenced by the context in which they occur.
- Data gathering must involve the use of multiple sources and multiple methods.

Each of these points requires further examination and explanation, as follows.

*Human beings are essentially interpretative and symbol constructing.* Qualitative methods are built on an interpretative model of human behavior. Of the various sociological and psychological theories that stress the interpretative elements of human behavior, the one that is most directly relevant to qualitative research is symbolic interactionism. A number of social scientists, such as Smith and Manning and Denzin, view symbolic interactionism as the cornerstone of qualitative methods.[8]

The sociologist Blumer built on the works of Mead and coined the expression "symbolic interactionism."[9] In referring to the interpretative process, Blumer said:

> The term "symbolic interaction" refers, of course, to the peculiar and distinctive character of interaction as it takes place between human beings. The peculiarity consists of the fact that human beings interpret or "define" each other's actions instead of merely reacting to each other's actions. Their "response" is not made directly to the actions of one another but instead is based on the meaning which they attach to some actions. Thus, human interaction is mediated by the use of symbols, by interpretation, or by ascertaining the meaning of one another's actions. This mediation is equivalent to inserting a process of interpretation between stimulus and response in the case of human behavior."[10]

Blumer saw three essential ideas of symbolic interactionism: that human beings act on the basis of meanings, that meanings are a product of social interaction, and that meanings are modified and handled by an interpretative process.[11]

The emerging models of social work practice also imply an interpretative and constructionist model of human behavior. Their emphasis on process and communication necessitates an interpretative view of people. For instance, Constable maintained that the interpretative phenomonological model is an important and needed theoretical frame of reference for most family therapy, neurolinguistic programming, and communication approaches to practice.[12] In a similar vein, Anderson argued that a practice theory based on symbolic interactionism provides a basis for integrating the content of human behavior with values and skills for generic practice.[13] Lane viewed symbolic interactionism, along with psychoanalytic theory, as an important component of the social work knowledge base.[14]

A methodological implication of symbolic interaction is that the researcher must study the social world as it is viewed by the people who act in it to get at their meaning structures. Patton put this task into the context of interviewing: "The fundamental principle of qualitative interviewing is to provide a framework within which respondents can express their own understanding in their own terms."[15]

*Knowledge is gained most directly by participation and involvement.* Meanings essentially result from an interpretative process. They are not simply "out there," external to the actor and directly available to the researcher and the practitioner. Rather, they are arrived at through a process of participation and negotiation. Wax referred to this process as resocialization:

> Secondary socialization (or resocialization) does not supply the fieldworker with the same authority as the native. However intimate and extensive an experience, no period of living within another culture can fully compensate for the lack of childhood experiences therein. Yet, because culture is a dynamic system maintained and modified by its members, participation is the most efficient way to gain as near total a grasp of it as is possible for the alien. In participating as he observes, the fieldworker undergoes a secondary socialization (or resocialization) which allows him to perceive the major categories of objects of the culture and to understand the major types of relationships and interactions. Thus, he gains something of an "insider's" view, a view that is extremely difficult and sometimes impossible to acquire with such secondary devices as structures questionnaires.[16]

Wax noted that the understanding gained through participation is, in effect, a precondition to research in any social situation.[17] Such understanding is necessary for all forms of social research, but qualitative research makes it explicit rather than implicit. The use of knowledge gained by participation but presented as if it is the product of "objective" methodology is what Douglas termed "laundering the data."[18] Similarly, such practice skills as the use of empathy and pacing require a degree of involvement in the life world of the client.

Methodologically, the implication is that researchers must participate at some level in their subjects' world of meanings. Douglas went so far as to argue that the first test of world truth is direct individual experience and that such experience is essential for the social researcher.[19] The level and degree of involvement vary according to the nature of what is studied.

*Reality is multilayered and multiperspectual.* A premise of the qualitative perspective is that, in studying social situations, the researcher frequently confronts multiple and sometimes conflicting perspectives.[20] The researcher thus discovers no single, universal truth but, rather, different perspectives that reflect how different groups with different interests view the same situation. Social work practice also occurs in a context of competing and conflicting interests, as Rein and White noted:

> Social work is not, nor can it ever be, a universalistic practice governed completely by the following of rational or institutional rules. Nor, furthermore, can any human being adopt a universalistic kind of attitude toward other people, concerned but dispassionate, unbiased. We approximate these ideals among humans —in social work and perhaps in any human practice—by multiplying conflicting solidarities. A social worker is: (1) a member by origin of some distinctive social group (say a big-city resident, Italian); (2) a member of the fellowship of social workers; (3) a member of an agency; (4) a member of the city government; (5) a taxpayer. So when others come to him and place pressure upon him in their interests, they are not appealing from the outside. They are in some very real sense "kinsmen" of the social worker, appealing to interests that both the other and the social worker have in common. The conflict of purposes and values is not outside the social worker; it is inside.[21]

Patton made a similar point about the task of evaluation. He argued that qualitative evaluative research provides not truth but perspective:

> In studying the utilization of evaluation research . . . I found that decision makers and information users did not expect evaluation reports to produce "truth." Nor did they treat evaluation reports as containing "truth" in any fundamental sense. Rather, they viewed evaluation findings as additional information that they could and did combine with other information (political, experential, other research, colleague opinions, and so on), all of which fed into a slow, evolutionary process of program development.[22]

The research implications of this assumption are that researchers should attempt to gather data from representatives of the major perspectives or interests involved in a particular matter or issue. Correspondingly, they should avoid attempting to study the topic from only a single vantage point. Hence, this assumption also suggests the utility of a team or multiple-investigator approach.[23] It further points to the possibility that researchers have natural advantages or difficulties in studying certain social groups and social situations—a fact that is already well known by many practitioners. Wax noted, in her and her husband's study of a Pine Ridge Indian reservation, that only she had access to Indian matrons and that young Indian interviewers were the only ones able to interview Indian adolescents.[24]

*Perception and behavior are strongly influenced by the context in which they occur.* This statement implies that meanings are influenced not only by perspective but by context. Patton observed the following about the use of qualitative methods in evaluation:

> Researchers using qualitative methods strive to understand phenomena and situations as a whole; evaluators using qualitative methods attempt to understand programs as wholes. The researcher strives to understand the gestalt, the totality, and the unifying nature of particular settings. This holistic approach assumes that the whole is greater than the sum of its parts; it also assumes that a description and understanding of a program's context is essential for understanding the program.[25]

Hollenshead noted the importance of studying what she referred to as the embedded "life world" of subjects:

> In trying to understand the life-worlds of others, human science researchers are acutely aware of the fact that human beings are embedded in a period of history, a culture or cultures, and a particular social and political world. Thus, the individual's cultural, social, political context, and life history are not seen as "confounding variables," but as essential elements that must be taken into account in any investigation.[26]

Rein and White claimed that the context in which social work occurs is what makes it a distinctive profession; the context is primarily bureaucratic and institutional. They added that, contrary to the traditional models of science, which attempt to control for context, what social work needs is context-specific knowledge.[27] Methodologically, this element of the qualitative perspective dictates that the researcher describe and gather information about context and that these steps are a crucial part of the research process. All observations and interviews take place in a context, and that context should be fully described. Part of the description should involve the researcher's degree of involvement with and relationship to the phenomena under study. For example, fieldworkers should keep an ongoing record of their reactions to what they observe.

*Data gathering must involve the use of multiple sources and multiple methods.* This point follows logically from the four preceding points. Conceptually, because reality is complex and multifaceted, a rigid approach to methodology would result in the potential exclusion of significant data. Denzin used the term "triangulation" to describe the emphasis on multiple sources of data and multiple methods:

> ...I concluded that no single method will ever permit an investigator to develop casual propositions free of rival interpretations. Similarly, I conclude that no *single* method will ever meet the requirements of interaction theory. While participant observation permits the careful recording of situations and selves, it does not offer direct data on the wider spheres of influence acting on those observed. Because each method reveals different aspects of empirical reality, multiple methods of observation must be employed. This is termed *triangulation.*[28]

Elsewhere Denzin noted that there are four types of triangulation:

> There are four basic types of triangulation. (1) *Data triangulation* has three subtypes: (a) time, (b) space, and (c) person. Person analysis, in turn, has three levels: (a) aggregate, (b) interactive, and (c) collectivity. (2) *Investigator triangulation* consists of using multiple rather than single observers of the same object. (3) *Theory triangulation* consists of using multiple rather than single perspectives in relation to the same set of objects. (4) *Methodological triangulation* can entail within-method triangulation and between-method triangulation.[29]

In a similar vein, Heineman-Pieper called for a flexible approach to methodology in social work research because no one approach has a lock on the truth. Following Simon, she referred to this view of methodology as heuristics.[30]

Methodologically, this aspect of qualitative perspective compels researchers to seek data of different types, using a variety of methods and as many investigators and sources as possible. Therefore, in addition to the normal use of observation and interviewing, qualitative researchers should make use of secondary sources, other studies, documents, informants' perceptions, natural experiments, and so on. In other words, they should use whatever relevant data they can find. However, triangulation implies that they should subject the data to qualitative reliability and validity checks as well.

It should be noted that triangulation can be used as a technique for dealing with issues of reliability and validity. In terms of validity, triangulation is similar to the logic of convergent validity in the sense that one can have more confidence in research findings if several different sources point in essentially the same direction. Triangulation also provides a logic for assessing the reliability of information. Douglas referred to this aspect as "checking out the data."[31] Part of the intent of the checking-out process is to establish the reliability of key informants and key subjects and thereby the reliability of the data itself.

## RELEVANCE TO PRACTICE

The importance of attempting to understand qualitative research as a perspective that consists of theoretical and methodological components is of primary relevance to those who would use such a model in social work or other applied fields such as counseling, education, or nursing. A qualitative perspective provides a frame of reference for viewing and using research. It also suggests that applications of the model extend beyond research to the world of education and direct practice. A logical inference of the five elements of the qualitative perspective is that a sharp distinction between the science of human behavior (and research into it) and the practice applications of that science is, to some extent, fallacious. It is fallacious in the sense that the qualitative perspective presupposes that everyone is a "scientist" engaged in the world of everyday life and that, in varying degrees, everyone is interested in understanding that life world. The qualitative perspective suggests that researchers would gain a greater understanding of that world by a more systematic application of the principles that underlie qualitative research.

Contemporary social work practice is contextual, interactive, and multimethod in orientation and is characterized by the person-environment interface.[32] Individual practitioners also are increasingly concerned with the evaluation of their practice. Qualitative research and the qualitative perspective offer a methodology that is consonant with these contexts and concerns and that has the potential to narrow the gap between researchers and practitioners.

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# QUALITATIVE RESEARCH METHODOLOGIES

Tony Tripodi

ABSTRACT: Methodologies, philosophical perspectives, and definitions of qualitative research are briefly described. Several strategies for gathering and analyzing qualitative data are discussed. A model for incorporating qualitative research in social work practice is presented, and selected applications of qualitative research in school social work are provided.

The purpose of this chapter is to present critical elements of various qualitative research methodologies and to consider their potential utility for school social work practice. A brief discussion of philosophical perspectives that lead to different but related definitions is followed by a specification of objectives and functions of qualitative research. Qualitative data are defined, and strategies for gathering and analyzing those data are reviewed. Suggestions for incorporating these ideas in school social work are then discussed.

## What is Qualitative Research?

Qualitative research refers to a set of procedures for gathering and analyzing qualitative or non-quantitative data. Such data can assist in the location of problems for intervention, the monitoring of practice interventions, and in the evaluation of practice effectiveness. Rigorous methods are employed for data analyses, such as case comparisons (Butler, Davis & Kukkonen, 1979; Glaser & Strauss, 1970), historical comparative analyses (Leashore & Cates, 1985), analytic induction (Huberman & Miles, 1985) and content analysis (Allen-Meares, 1984; Smith, 1982). Qualitative data are not categorized into any of the basic measurement scales used for quantitative analysis: nominal, ordinal, interval, and ratio scales. However, as does quantitative research, qualitative methods produce empirical data, i.e., those that are based on experience and observations (Epstein, 1985, p.274).

### Qualitative Research Perspectives

Definitions of qualitative research are influenced by two basic philosophical approaches to developing knowledge. One approach is that of logical positivism in which a theoretical proposition can only be accepted if it is empirically verified by a quantitative research method (Epstein, 1985). Qualitative data are only useful if they can be transformed into quantitative data (Bednarz, 1985).

A second approach emphasizes phenomenology. Knowledge is derived by studying the subjective experiences of actors involved in social phenomena (Filstead, 1970), such as the social worker's assessment of a family's functioning, the process of social work interventions with a child with learning disabilities, and so on. These subjective experiences are described narratively. This approach subsumes three interrelated perspectives: interpretivism, ethnomethodology, and historical research. In the interpretivist perspective actions of persons in a system are described by referring to their subjective interpretations of events and their patterns of interaction in culturally appropriate terms (Bednarz, 1985). Qualitative data are regarded as important in themselves and are not transformed into quantitative data as in the positivist approach.

Ethnomethodology emphasizes the context in which action takes place, and attempts to uncover significant meanings that are attributed to a phenomenon by actors in the system (Watts, 1985). For example, the interactional context of treatment team decisions about children's school adjustment might be examined from the different perspectives of teachers and social workers. Ethnomethodology is distinguishable from interpretivism in that it emphasizes the use of procedures (such as documentary interpretation) which assume that the explanations of all actions are dependent on their social-interactive contexts. However, the basic distinction is a matter of conceptual orientation since both approaches use similar methods for gathering and analyzing data.

Although not typically classified as qualitative research, historical research uses and produces qualitative data and seeks to describe and explain events by examining primary and secondary sources of information (Leashore & Cates, 1985). The historical perspective provides the dimensions of time and comparison (Tripodi, Fellin, & Meyer, 1983). Besides studying documents that represent the past, historians may obtain the perceptions of past events as reported by key informants through oral histories.

## Qualitative Research Definitions

Dooley (1984, p. 266) offers this definition in his text, Social Research Methods: "The term 'qualitative research' will refer here to social research based on nonquantitative observations made in the field and analyzed in nonstatistical ways." He also indicates that qualitative data are obtained from direct observation and relatively unstructured interviewing.

A related definition by Filstead (1970, pp. 6-7) also reflects the philosophical perspective of phenomenology as well as a de-emphasis of logical positivism.

> Qualitative methodology refers to those research strategies such as participant observation, in-depth interviewing, total participation in the activity being investigated, field work, etc., which allows the researcher to obtain first-hand knowledge about the empirical social world in question. Qualitative methodology allows the researcher to "get close to the data," thereby developing the analytical, conceptual, and categorical components of explanation from the data itself - rather than from the preconceived, rigidly structured, and highly quantified techniques that pigeonhole the empirical social world into the operational definitions that the researcher has constructed.

Whereas Filstead indicates there is a blurring between data collection and analysis in qualitative research, Huberman and Miles (1985) develop and structure procedures for data analysis that are distinct from the collection of qualitative data. They refer to an eclectic methodology for qualitative research which combines clinical and social judgment, analytic induction for generating qualitative data, and qualitative data analysis, including procedures for reducing and displaying data.

Finally, Ruckdeschel (1985) presents the point of view that qualitative research is more useful to social workers if it is conceived as a broad perspective for viewing social interactions. Furthermore, he abstracts five core elements of qualitative research methods:

- People are essentially interpretative and symbol constructing.
- Knowledge is gained most directly by the process of participation and involvement.
- Reality is multilayered and multiperspectual.

- Perception and behavior are strongly influenced by the context in which they occur.
- Data gathering must involve the use of multiple sources and multiple methods. (p.18)

## Qualitative vs. Quantitative Research

All of the above definitions are interrelated, emphasizing different philosophical assumptions and strategies for collecting and analyzing qualitative data. Ruckdeschel's qualitative research perspective can be used to provide a frame of reference for considering the extent to which qualitative and quantitative research methods are similar and different. According to Epstein (1985), quantitative research methods are based on logical positivism and primarily employ experimental, quasi-experimental, and survey research designs to produce quantitative-descriptive, associational, and causal knowledge. Data are categorized into one or more measurement scales, and statistical and mathematical procedures are used to describe frequency distributions and associations among variables. Deductive logic is emphasized in deriving hypotheses to be tested. Ruckdeschel's first two points in the qualitative perspective are unique to qualitative research, while the last three points are applicable (although emphasized more in qualitative methodologies) to quantitative as well as qualitative methods.

Both quantitative and qualitative methods employ rigorous procedures for generating empirical knowledge, and the methods used in either approach can generate quantitative and qualitative data. The form of the collected data is dependent on whether there is an underlying positivistic or phenomenological perspective. In any extensive research investigation, qualitative and quantitative data can be obtained so long as the investigators are prepared to do so. For example, when studying the participation of a family in interventions by school social workers, quantitative data may be gathered by means of questionnaires and self-rating scales on the extent to which family members believe participation with school social workers will help their children improve their attitudes toward school and their school performance. Moreover, data can be gathered regarding school attendance, tardiness, grades, and test scores. Qualitative data can be obtained from the social workers' observations of the interactions between parents and children as they provide information and participate in or resist efforts by social workers to engage them in discussions. Analyses of the contents of social work interviews might also provide information by which social workers learn about families' points of view about the desirability of school adjustment and their roles in helping their children.

Epstein (1985) describes misconceptions that have been derived from anti-quantitative ideologies, and he clearly demonstrates the compatibility of quantitative and qualitative methods. He indicates that qualitative methods are preferable when one is seeking descriptive knowledge and when there is little theoretical, historical, and contextual knowledge about the phenomenon being investigated. In contrast, quantitative methods are most useful for testing theory-based hypotheses in social contexts that are well-described, and for accurately describing and comparing opinions, beliefs, and attitudes in social surveys.

## Qualitative Research Objectives

Qualitative research has these generalized knowledge objectives: generation of hypothetical-developmental knowledge; detailed qualitative descriptions of social and psychological phenomena; and the articulation and refinement of substantive theory. Hypothetical-developmental knowledge includes the generation of specific research questions, the specification of causal or associational hypotheses, and the development and definition of concepts (Tripodi, 1985). Detailed qualitative descriptions aim: to provide in-depth understanding of the organizational and social interactional context of the social unit studied in its natural setting (Chadwick, Bahr, & Albrecht, 1984); to present the life history of specified social units (Denzin, 1978); and to document policies and practices of social organizations that have been applied to particular population groups (Leashore & Cates, 1985). Substantive theory attempts to explain social phenomena by interrelating concepts and hypotheses (Glaser & Strauss, 1967, 1970).

These knowledge objectives can be more specifically described as functions of qualitative research. Guba's (1987) description of naturalistic evaluation has very similar if not identical objectives to those of qualitative research and specifies the following functions: exploration, description, illustration, realization, and testing.

The function of exploration involves the development of insights as well as research questions and hypotheses that can be subsequently tested by quantitative or qualitative methods. In exploratory interviews with parents of children with emotional difficulties, for example, it might occur to a social worker that, in a sample of interviewees, middle class parents are more likely to cooperate with school social workers if they see the resolution of their children's emotional difficulties as a means to increase the school performance of their children. Such ideas, after they have been generated, can be tested more systematically with other workers, parents, and children in the same or similar school districts. Description can serve to produce qualitative data for giving meaning to a phenomenon; it can also be used to provide information about the extent of implementation of social work programs and interventions. For example, a parent's statement that a child doesn't do chores at home becomes more meaningful when the home situation, the type of chores, the context in which chores are done, and the incentives for doing them are described. The home may be filthy, and a parent may be inebriated periodically, indiscriminately giving chores to the child, but not checking to see whether or not they're complete. In such a situation an intervention based on reinforcements emitted by the parent is not likely to be successful unless the context at home is changed. The functions of illustration and realization are intended to be complementary to quantitative research in that they illustrate the quality of the phenomenon being investigated and make it more life-like or apparently real than the presentation of statistical data. These functions imply a joint usage of qualitative and quantitative research methods. Hypotheses can be tested by examining the extent to which an hypothesized phenomenon exists in an aggregation of cases.

## Strategies for Gathering Data

### The Case Study

The fundamental research design for qualitative research is that of the case study (Tripodi, 1983, 1985). It is a central feature of field studies and of ethnomethodology (Watts, 1985; Zelditch, 1970), and is flexible so that it can be utilized to gather data that represent different conceptions of natural phenomena. The case study can be employed to study a social unit at a particular point in time or across time as in cohort or panel research. The basic strategy is to thoroughly describe a single unit, which may be an individual case, family, group, social organization, school, community, etc. The design involves a description, typically qualitative and quantitative, contrasting groups and experiences that are based on data gathered by techniques such as participant observation, informant interviewing, and documentary analysis. The sampling is purposive. Patterns of natural growth, maturation, and history are described to provide a solid, contextual perspective of the social unit. Available documents are reviewed and key informants are interviewed to contrast and study different perceptions of the phenomenon being studied. The case study might be used in a school setting, for example, to describe the process of detention where those with school disciplinary problems are required to spend time after school. Data would be gathered on how students are assigned to detention. In addition, observations would be made as to what transpires during detention, noting how detention teachers might give positive or negative reinforcements to the children. Also, teachers and students would be interviewed to determine whether their knowledge of students' being in detention changed their opinions of them. Zelditch (1970) indicates that field studies use the same methods as case studies to gather information about incidents and histories, distributions and frequencies and rules and statuses. His strategy for analyzing the information is to make a judgment as to whether the information is adequate, noting the extent to which data are accurate and complete.

Kratochwill, Mott, and Dodson (1984) identified three types of case study in clinical psychology that are also relevant for practicing social workers:

1. Non-therapeutic case study which is either an uncontrolled descriptive study of human development, or a biographical or autobiographical account of one's life;
2. Assessment/diagnosis case study which is focused on the use of assessment instruments for describing and making clinical inferences about a case; and
3. Therapeutic/intervention case study which can range from the detailed, qualitative description of a unit which is receiving

interventions to single case designs that invoke a variety of controls and quantitative methods for evaluating the effectiveness of an intervention.

The school social worker is rarely involved in the time-consuming non-therapeutic case study which involves an extensive description using historical, biographical, and other available data sources. S/he is more likely to be engaged in the assessment/diagnosis case study, for example, repeatedly interviewing a child for purposes of determining the level of the child's self-esteem. Standardized instruments for measuring self-esteem may be administered as well as focused interviewing about the child's feelings about his school performance. The therapeutic/intervention case study can be a systematic way of practice using a basic single case design such as multiple measurements before and during intervention to evaluate the effectiveness of practice. For example, multiple measures of class tardiness might be taken to establish a baseline rate of tardiness. When intervention is administered, measurements of tardiness are taken to determine if tardiness has been reduced while the intervention takes place.

### Participant Observation

The primary method for gathering information in the case study is participant observation, which is described by Ramos (1985, p.344): "It is a research method in which the investigator is also a participant in the social setting being studied. And it is a method by which people's actions and verbalizations are observed and recorded in a description of small-group life and the micro aspects of social order." He describes the process of participant observation as "selecting the research questions, gaining entry into the group, gaining rapport with group members, getting involved with group members, depth interviewing, recording the data, ending the study, and writing the report" (Ramos, 1985, p.345).

Participant observation is used to derive perspectives on social phenomena, to develop ideas for further research, and to explain social events. Participant observation can provide data that are useful for evaluating social work interventions and programs. The operation of programs and the extent to which individuals feel they have been helped by interventions can be thoroughly studied (Kurz, 1983). Moreover, the method can be employed in the development of biographical analyses (Perry, 1985). Persons who are familiar with the biographee are interviewed, which can lead to the discovery of experiences and events that were important to the biographee; the biographer then attempts to participate in similar events and experiences to gain more ideas about possible attitudes and feelings the biographee might have had.

The major disadvantages of participant observation are: it is very time-consuming; the presence of the observer in the social setting may alter the behaviors that are observed; and the biases of the investigator may be difficult to minimize (Kurz, 1983). The reliability of observations is not in question when the purpose of a study is to generate questions and hypotheses; however, reliability can become a problem when the qualitative research data are used to explain a phenomenon. Strategies that are used to increase a study's reliability examine the credibility of informants and compare volunteered statements--i.e., those that are salient to respondents as opposed to those made in response to focused questions (Zelditch, 1970), and also the employment of "triangulation," a comparison of the results produced by multiple observational methods in terms of their consistency (Ruckdeschel, 1985).

### Historical Research

Historical research, like participant observation, seeks to provide thorough descriptions; it uses multiple sources of data to describe the historical development of a current, social phenomenon. Evidence is gathered, quantitative as well as qualitative, that bears on a research problem; the task of the researcher is to determine the meaning of the evidence by comparative and contextual analyses (Stuart, 1988). Historical research procedures can be used in case studies, or a case study may be entirely based on an historical examination of a phenomenon.

### The Jury Trial

A procedure related to participant observation that is rarely used but has promise when data are gathered for the purpose of making a decision is the Jury Trial (Levine et al., 1978). It involves the specification of a decision (e.g., the effectiveness of a school program) and the specification of what kinds of data are necessary to make that decision. Multiple types of data are collected and they are presented to a panel of jurors comprised of key persons related to the decision (students, teachers, social workers, parents, psychologists, and principals). Other persons may provide testimony. The panel reviews all of the data and bases its decision on its interpretation of the evidence, in a manner similar to that which might occur in an actual trial.

### Types of Data

There are two basic types of data used for qualitative research: primary and secondary. Primary data are gathered originally during the research by the investigator, whereas secondary data are already available (Tripodi, 1983).

Primary data can be obtained from questionnaires, interviews, tests, and participant as well as non-participant observation. The qualitative data obtained from these techniques are based on non-coded responses to open-ended questions in questionnaires and on unstructured or semi-structured interviewing formats in which respondents are not forced to choose among possible response alternatives but can answer questions in their own words to reflect their perceptions and opinions. Qualitative responses can be made to psychological tests used for diagnostic purposes such as those involved in projective and semi-projective techniques: Thematic Apperception Test, sentence completion tests, and so forth. For purposes of qualitative research, observations are primarily narrative and may be recorded by field notes, daily logs, tape recordings, or films.

Secondary data sources consist of any narrative or visual contents that are available to the researcher. These include recorded interviews, films and photographs, maps, charts, written documents, minutes of meetings, agency policy statements, statutes, case records, and so forth. These data can be used in their original form or can be abstracted and summarized qualitatively or transformed into quantitative measurement by coding or content analysis. In school settings these data might consist of class schedules, organization and minutes of parent-teacher associations, attendance and tardiness records, teachers' comments on grades, responses to psychological tests, and so on. They might be obtainable, for example, from central administrative offices, counselors' files, and teachers' notes and records.

## Data Transformation and Analysis

### Transformation Strategies

Butler, Davis, and Kukkonen (1979) describe in detail how the method of case comparisons can be used to develop a keen understanding of social work practice. This method, like other comparative methods such as the method of constant comparisons (Glaser & Strauss, 1970), has the purpose of developing abstractions of qualitative data that succinctly summarize and explain social phenomena. A case is conceived as a social unit that represents practice with individuals, groups, communities, organizations, or policies. The basic strategy of case comparison involves the comparison of similarities and differences among cases and abstracting from them a reduced number of cases: concepts are then developed to explain their interrelationships. According to Butler, Davis, and Kukkonen (1979, pp. 4-5), the method of case comparison has "four sequential processes: (1) inquiry into pre-existing formulation of practice, (2) testing of practice formulations through comparative case observation, (3) application of practice formulations taken from reference cases, and (4) summary of contribution to practice knowledge buttressed by published reference cases." This involves the interviewing of practitioners to describe their intervention practice and theory, the comparisons of practitioners' beliefs with their practice behaviors and the researcher's development of categories to describe practice, the modification of those categories by reviewing data that report on actual practice, the development of "reference cases" to more succinctly describe practice, and the comparison of new cases to reference cases.

Content analysis involves the development of categories to describe qualitative data. Those categories could be regarded as qualitative abstractions of the data. They are transformed to quantitative data in the form of nominal measurement scales when the categories are defined such that they are mutually exclusive and exhaustive for a particular dimension, and when it is demonstrated there is a high degree of inter-observer reliability among independent investigators (Allen-Meares, 1984; Tripodi & Epstein, 1980). Uncategorized data from open-ended questions in interviews and questionnaires as well as narrative accounts can be changed to quantitative data in this manner. Comments from children in play therapy might be categorized, for example, to represent "typical" fears of children when changing to different school systems.

## Data Analytic Strategies

Qualitative data analysis includes these interrelated components: data reduction, data display, forming conclusions and verifying them (Huberman & Miles, 1985). The information obtained in field notes is reduced by the investigator selecting, focusing, and simplifying it at a higher level of abstraction. The use of multiple comparison groups provides a context for noting similarities and differences among groups, which in turn leads to generalized relationships among categories, i.e., hypotheses related to the investigators' implicit theories (Glaser & Strauss, 1970). For example, a group of high school drop-outs might be compared with a group of those who stay in high school. A high degree of drug use and lack of parental supervision may be discovered among the drop-outs but not among those who stay in school. Further, there might be no discernible differences in age, race, and intelligence between the groups. The researcher may relate these notions to theories about hopelessness and despair, hypothesizing that there is more likely to be class, status, and income differences between drop-outs and those who stay in school when their parents or guardians are feeling alienated themselves from the mainstream of society. It is important for the investigator to develop a working theoretical model which links together hypotheses that are abstracted from group similarities and differences. This helps to transform as well as reduce the observed data.

Data displays are convenient, heuristic devices that further reduce the data. These displays consist of graphs, charts, and figures to show a model of hypothesized relationships. These posited relationships are tried out in examining new data obtained from replication. This has the purpose of yielding conceptually reliable data, which means that the same qualitative categories are sufficient to describe old as well as newly generated data.

Finally, conclusions regarding the development of hypotheses, theory, and explanations of phenomena are verified by a series of procedures such as those specified by Huberman and Miles (1985, pp. 368-369): "checking for representativeness, checking for researcher effects, triangulation (consistency of results from multiple sources), weighting the evidence, making contrasts/comparisons, checking the meaning of outliers, using extreme cases, ruling out spurious relations, replicating a finding, checking out rival explanations, looking for negative evidence, getting feedback from informants, and documenting and auditing conclusions." The qualitative researcher systematically develops hypotheses and examines them rigorously in the context of qualitative data. Multiple data sources are employed, and explanations of phenomena are tested for their plausibility and their applicability with respect to explaining similar phenomena.

## Applications to School Social Work Practice

Qualitative research methodologies can be applied to school social work practice by illustrating their utility in a model of direct practice and by showing their potential for providing useful information related to functions and roles of school social workers.

### A Model for Incorporating Qualitative Research in Direct Practice

Tripodi and Epstein (1980) demonstrated that quantitative research methods can be incorporated by practitioners if they regard them as components (Blythe & Tripodi, in press): assessment (the specification of problems), planning interventions (the standardization and actual use of interventions for accomplishing practice objectives), and termination and follow-up (the cessation of interventions and follow-up procedures to determine the extent to which practice gains are maintained).

The school social worker can incorporate and modify qualitative research methodologies by:

1. employing a phenomenological perspective for the processing of qualitative data for single cases, allowing for the combination of quantitative and qualitative data when appropriate;
2. acknowledging that s/he functions as a participant observer and interviewer in providing direct services;

3. using and analyzing qualitative data; and
4. employing methods such as case comparisons and content analysis.

For example, in providing interventions to a family, the social worker can obtain data based on measurement devices administered for the family as well as for her/his interviews and observations. After interview sessions which are tape recorded the social worker can analyze the contents of the interviews in terms of which family members speak the most and the extent to which there are positive and negative interactions among members and towards the worker. An examination of patterns of thematic content associated with negative interactions can lead to hypotheses about further implementation of interactions.

A supervisor might be interested in assessing the degree to which students are employing concepts and principles about intervention that are discussed in group supervisory meetings. Questionnaires can be developed to derive students' perceptions of their use of concepts such as support, reinforcement, and confrontation in particular interviews with clients. Interviews can also be recorded to provide qualitative data for interviews with different clients for the same student as well as for cases across students. Cases can be compared to determine whether or not principles discussed in supervision are employed, whether they are used indiscriminately or methodically irrespective of client problems and so on. Tripodi and Epstein (1980, pp. 103-120) provide a detailed discussion of how to use content analysis for this purpose.

To assess the extent to which school children have problems and whether or not they are identifiable as children with special educational needs (Allen-Meares & Lane, 1983), observations and informal interviewing can be used by school social workers. Observations can be made in the classroom as well as in interviews. Moreover, the jury trial could be modified and used for team meetings which are employed to weigh evidence of emotional dysfunctioning and to plan interventions.

Since school personnel have similar and different functions (Radin & Welsh, 1984), the method of case comparisons can be used to spell out these functions for participating personnel for particular cases. This information could be used to plan cooperative treatment interventions among teachers, counselors, psychologists and social workers.

Interventions are often implemented differentially, and the more knowledge school social workers have about different groups, the more likely will interventions be effectively implemented. By comparing case records for contrasting groups it is possible to locate different responses to interventions. McNeely and Badami (1984), for example, found culturally based differences in communication styles between black and white students; blacks preferred the use of titles and minimal eye contact, while whites tended to use first names and emphasized eye contact. Finally, qualitative data can be obtained from interviews with parents, teachers, and the child regarding possible reasons for the extent to which gains from intervention are or are not maintained.

## Aggregating Cases to Produce Hypotheses, Theories, and Explanations

A second way to illustrate the potential applicability of qualitative research methodologies to school social work is to specify roles and functions of school social workers and then select methodologies that can produce useful knowledge. Costin (1987) identifies the following as roles and functions of school social workers: identification of children in need, extending services to pupils, work with school personnel, educational planning for handicapped children, work with parents, and community service.

For each of those functions, the method of case comparisons can be used to develop categories of need, pupils, personnel, and services. Content analysis can be applied to a review of themes present in a number of cases related to services. Handicapped children and non-handicapped children can be compared with respect to differential strategies of social work services and aids and hindrances to their effective implementation. Standardized intelligence, achievement, and personality tests, and projective techniques can provide data for identifying specific needs and psychoeducational deficits. Closed-ended and open-ended questions in survey questionnaires can produce quantitative and qualitative data that are pertinent to parent, teacher, and pupil needs.

Key informants can provide information pertinent to the development of strategies for school social workers to use in the political context of the school (Lee, 1983). Furthermore, analysis of cases of school drop-outs, pregnant teen-agers, and other special groups can lead to hypotheses about issues that might be salient for community groups to consider. A community school system can be evaluated by multiple methods. Hendrickson (1984) conducted an evaluation of 45 elementary schools, employing an analysis of administrative history and staff patterns, the aggregation of case studies, and the systematic comparison of schools with and without counselors to describe the range of stability of services.

## Conclusion

Qualitative research methodologies can be used alone or in combination with quantitative research methods to produce a variety of qualitative data that can lead to the development of hypotheses, theoretical propositions, explanations, and descriptions of social phenomena. Although used to a very minor extent in school settings where survey methods have most often been employed, it is believed that phenomenological perspectives are useful for generating as well as interpreting data. The methods of participant observation, interviewing, paired comparisons, and content analysis are regarded as useful tools for school social workers.

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# THE ETHNOGRAPHIC INTERVIEW AS A USEFUL TOOL FOR THE SCHOOL SOCIAL WORKER

Ron E. Roberts and James G. McCullagh

ABSTRACT: The Developmental Research Sequence, consisting of 12 major tasks, as created and refined by Spradley, for conducting ethnographic interviews is described. Applications for school social workers are offered. Examples from a study of "Dirtheads" and school social workers are used to illustrate the 12 steps and analyses employed to construct ethnographies of cultural groups.

One of the most important tools for those working in the helping professions is an understanding of human cultures. An infinite numbers of cultures exist in the world. In one sense culture is an exchange of knowledge and skills passed from person to person. As Frake (1977, pp. 6-7) explains, culture is "a set of principles for creating dramas, for writing scripts, and of course for recruiting players and audiences." Spradley (1979) defines culture as the "acquired knowledge that people use to interpret experience and generate social behavior" (p. 5).

For the school social worker, the implications of these ideas are clear. The school is a crucial focus of cultural knowledge. To understand the needs of students, it is useful to examine the school as a "cultural scene". The school is a setting for a variety of professionals, primarily classroom teachers, but also other staff members from bus drivers to the superintendent and local board members. The school is also one place where students discover their relationship to others, become assigned to one or more groups, and assume a variety of roles. Students "know their place", how they fit, and how they are characterized by others. The terms "freaks", "greasers", "burnouts", "jocks", and "beautiful people" give expression to a way of self and other identification. Students spend much of their time with other children or youths within the schools and neighborhoods. They attend classes (all kinds, from the special education self-contained to college prep), but how they perceive their educational experiences and with whom they spend their "free time" varies considerably. Within a variety of school and community settings all sorts of informal knowledge and skills are shared and learned from and with each other. It is a commonplace that the younger generation speak a patois that is semi-unintelligible to adults. Looked at in adult terms, this simply means that the youth culture created boundaries to keep professionals and other adults out and to gain a sense of identity for its members.

The school social worker typically is assigned to many educational programs--from a public preschool classroom or proprietary day care center to specialized schools for children and youth. School social workers and other support staff may travel among many schools and provide services that vary from one-half a day to between two and five days each week in a particular school. Practitioners work with children who may be labeled as children with special educational needs and who require related services. These children may be assigned such labels as "behaviorally disordered", "mentally disabled", or "learning disabled".

Aside from children and youth who are labeled and identified as needing special education and social work services, other students at risk for substance abuse, delinquency, pregnancy, nonattendance, or gang activity may benefit from social work interventions. Students also bring their ethnic and socio-economic identity to school, be they Black, Asian, Hispanic, Native American, Italian American. Social workers cannot easily be familiar with the variety of student or adult staff subcultures found in schools.

One effective way to understand schools and students--"cultural scenes"--is to approach each "scene" as an anthropologist would observe people on a remote South Seas Island. Neither would make assumptions about prior knowledge of the culture. Such humility is warranted when adults attempt to enter the cultural world of the young. School social workers, often outsiders to the school staff world, may benefit from approaching each school or program as a "learner", that is, a "student" rather than an "expert".

In this chapter a technique for discovering and understanding "cultural scenes" will be outlined. The recommended approach comes from a tradition in Sociology that is called "Grounded Theory" (Charmaz, 1983), a research methodology called "Ethnography", and a specific interview format--"Ethnographic Interviewing"--developed by Spradley (1979). Grounded Theory implies that one approaches the research situation devoid of preconceived notions about what will be found. "Ethnography offers all of us the chance to step outside our narrow cultural backgrounds, to set aside our socially inherited ethnocentrism, if only for a brief period, and to apprehend the world from the viewpoint of other human beings who live by different meaning systems" (Spradley, 1979, p. v). Ethnographic interviewing is a technique to gain information from an informant (e.g., student, teacher, bus driver) who participates heavily in the cultural scene.

We have been influenced by the work of the late anthropologist James Spradley. Spradley's step-by-step approach, the Developmental Research Sequence Method (DRS), for doing ethnography is detailed in his The Ethnographic Interview (1979) and Participant Observation (1980). One key to unlocking useful information about students' or staffs' "cultural scene" is conveyed to the investigator (school social worker) by means of language. It is also useful, of course, for the worker to observe the cultural scene in a systematic way where possible. Though the focus of this chapter is on ethnographic interviewing, which is one important technique of the ethnographer, readers are encouraged to read both texts by Spradley, as well as other sources on doing ethnography (e.g., Hammersley & Atkinson, 1983; Lofland & Lofland, 1984; Woods, 1986), and selected ethnographies, such as those written by Spradley (1970) and Spradley and Mann (1975).

School social workers enter schools as practitioners (who also evaluate practice and program effectiveness), whereas sociologists and anthropologists enter as researchers. The DRS method was developed for the social science researcher, but it has utility for practitioners. Practitioners are sanctioned to enter schools, visit with staff, interview parents and students, attend meetings, and intervene in the lives of selected students and their families. The social science researcher role may range from complete participant to complete observer.[1] The researcher is not expected to intervene or effect change, though that person's very presence may influence others, and the researcher's written report may impact on system change (e.g., Spradley, 1976).

Practitioners, however, can engage in "opportunistic research" (Riemer, 1977), that is, to view their work in schools as a "research setting". The practitioner, unlike the social science researcher, "already 'fits' into the setting by having a legitimate purpose for being there" (Riemer, 1977, 474).

One way to combine practice and ethnographic interviewing is to begin with "informant-expressed needs" (Spradley, 1979, p. 14) or with a specific human problem such as teenage pregnancy or early school leaving. This latter approach is called "Strategic research" by Spradley (1979, p. 15). Both approaches are compatible with an ecological perspective and assessment processes employed by school social workers (see Allen-Meares, Washington, & Welsh, 1986, pp. 211-231 for a comprehensive student, school, community assessment).

## The Developmental Research Sequence

The Developmental Research Sequence (DRS) consists of 12 major tasks: Choosing an informant, interviewing an informant, making an ethnographic record, asking descriptive questions, analyzing ethnographic interviews, making a domain analysis, asking structural questions, making a taxonomic analysis, asking contrast questions, making a componential analysis, discovering cultural themes, and writing an ethnography (Spradley, 1979). These tasks will be briefly reviewed.

### Choosing an Informant

An informant is not a subject, client, respondent, or patient. Informants are "native speakers .... [who] are engaged ... to speak in their own language or dialect" (Spradley, 1979, p. 25). They are also students, professionals, and staff in schools. Each group possesses "exclusive cultural knowledge" (Spradley & McCurdy, 1984, p. 3). It is this distinctive cultural knowledge that is sought. Informants will likely be the people with whom school social workers interact and students who are rostered as clients. Obviously the information that is obtained will be only as "good" as the informant gives. To understand a school it is desirable to choose a student who has attended the school or a specific program (e.g., self-contained class) for at least a year and who is willing to be a "teacher" or informant--to share his or her school and community world. In a personal conversation with the senior author, Spradley recommended that children under five years of age should not be used as informants due to their lack of verbal skills.

If, for example, one wanted to tap into the cultural knowledge of school social workers or principals, one would want an informant who has worked in the schools for at least four years. Excellent informants are those who are accessible and willing to grant "six to seven one-hour interviews" (Spradley, 1979, p. 51). They should be genuinely interested in the cultural scene that they would describe, verbal, relatively uninhibited, and would generally not censor their thoughts and feelings. They also should be nonanalytic, that is, "they do not analyze their own culture from an outsider's perspective" (Spradley, 1979, p. 54). It is important to establish and maintain a relationship of trust and confidence with the informant and to be clear and specific about the purpose of one's study or intended use of such information.

## Interviewing an Informant

Ethnographic interviews are unlike others forms of communication with friends, clients, respondents, patients, though such interviews may be viewed as "friendly conversations into which the researcher slowly introduces new elements to assist informants to respond as informants" (Spradley, 1979, p. 58). Informants need to be educated regarding their role. The interviewer must be clear and explicit regarding purpose, offer "ethnographic explanations" (p. 59), and employ ethnographic questions. Three main types of questions, with many variations, are used: Descriptive, structural, and contrast questions. Each will be discussed below.

Interviews may be formal or informal. The second author, for example, has interviewed over the last 18 months a few school social workers in one area education agency in Iowa to develop an ethnography of their world. Formal interviews have been conducted and have lasted between 45 and 90 minutes. Permission was secured to use a tape recorder. The transcription of these interviews provides a literal record or the "native language" of school social workers. Transcription is time-consuming; for each ten minutes of recorded interview, the interviewer needed an hour to transcribe. Informal interviews can occur at any time, for brief periods, and usually without a recorder.

## Making an Ethnographic Record

A record of interviews, impressions, feelings, future directions, hypotheses to be checked, artifacts, forms, and reports need to be collected, cataloged, and recorded. Traditionally anthropologists have created field-work notebooks to write up their interviews, observations, and analyses. Writing up of notes during the interview or shortly thereafter is absolutely necessary, otherwise much will be lost if a few hours or days elapse. A tape recorder solves the problem, but even brief notes should be taken in the event the recorder malfunctions or human error occurs. It is necessary to obtain a verbatim record of what informants say and to clearly distinguish between native terms of the informant and the language used by others, including the investigator. In addition to Spradley (1979), there are numerous accounts of how to organize one's field notes and interviews (see Bogdan & Biklen, 1982; Lofland & Lofland, 1984).

## Asking Descriptive Questions

Ethnographic questions are used to elicit the knowledge or concerns of the informant with regard to a particular cultural scene. Descriptive questions are the first type used. They facilitate a reduction in tension or apprehension for both the informant and investigator. They allow informants to describe a familiar scene, encourage informants to talk, and offer the investigator a beginning understanding of the cultural scene without imposing the interviewer's values or beliefs. Let us suppose we are interviewing a junior high school student in the midwest. We would begin by asking very general, descriptive questions, typically starting with one of four types of "Grand Tour" questions (Spradley, 1979, p. 86). An example of a "Typical Grand Tour" query would be: "Would you describe a typical day at school?". Another variation is the "Specific Grand Tour Question", such as, "Could you tell me what happened yesterday from the time you left for school?". Another is the "Guided Grand Tour Question", for example, "Could you show me around your school?" or "If you were to show me around your school, what would I see?". The fourth variation is the "Task-Related Grand Tour Question", for example, "Could you draw a map of how you come to school?"

A second set of descriptive questions is the "Mini-Tour" questions which are identical to the four variations of the Grand-Tour questions. Mini-tour queries are intended to describe a "much smaller unit of experience" (Spradley, 1979, p. 88). For example, Would you describe what happened yesterday at school from the time you arrived until you left?"; "Would you describe what you and your classmates did over lunch yesterday?"; "Would you show me around your classroom?"; "Could you draw a map of your classroom?".

## Analyzing Ethnographic Interviews

At this point, the researcher searches through his or her field notes for meaningful symbols. These symbols give meaning, structure, and knowledge to the cultural world of the informant. One important way to tap into these structures of knowledge is to understand them as systems of meaning. In the Ethnographic method, these systems of meaning can be understood as domains of knowledge. A domain is a way to organize the informants knowledge through linguistic classification. One crucial skill in doing this variety of research is the recognition of such categories of knowledge. Combing through one's field notes of the interview for such categories is a way to elicit cultural domains.

## Making a Domain Analysis

We can define a cultural domain as a category of knowledge that shares a single semantic relationship. In other words, it is a way of categorizing the folk knowledge of the informant by using his or her own native language terms. What does it mean to say that domains share only a single semantic relationship? First, let us say that there are only a finite number of semantic relationships in any language. Remember that semantic relationships are ways of organizing knowledge. Spradley (1979, p. 111) argues that every language contains at least nine semantic domains. They are as follows:

1. Strict inclusion: X is a kind of Y.
2. Part-whole: X is a part of Y.
3. Cause and effect: X is a result of Y.
4. Rationale: X is a reason for doing Y.
5. Location: X is a reason for doing Y.

6. Purpose: X is used to do Y.
7. Means-end: X is a way to do Y.
8. Sequence: X is a step in Y.
9. Attribute: X is a characteristic of Y.

At first glance these semantic relationships may seem to bear little relationship to our interviewing process. Yet each cultural domain we discover will fall under one of the above categories. In fact, good ethnographic research will cover cultural domains that involve all of the above categories. Let us be more concrete about the matter. The most common variety of semantic relationships one would find in ethnographic research is strict inclusion. A student of the senior author (McKay, 1984) studied the cultural life of a "Dirthead", which we could call a rebellious Junior High School student. Figure 1 gives us a cultural domain as elicited by the student. Note well that it is based on the principle of strict inclusion.

_Figure 1_. Kinds of Teachers (Cover term or label).

---

1. Nice ones
2. Pretty decent ones (Included terms)
3. Son of a bitches
4. Lard asses

---

This colorful cultural domain with its rather graphic native terms is a simple example of what we are discussing. Note that each domain is characterized by a "cover term", which labels the category we describe. In this case, it is "Kinds of Teachers" (X is a kind of Y). Then we find the included terms to be all the characteristics that fall under this common semantic relationship. Ethnographic thinking requires that we formulate questions in terms of these single semantic relationships.

The second author discovered over 50 cultural domains during the course of his interviews with a few school social workers. For example, cover terms included Kinds of AEA Forms, Kinds of AEA Support Staff, Kinds of Adaptive Behavior Scales Used in the AEA, and Ways to Identify Children for Evaluation. These cover terms would be obvious to most AEA employees. The included terms for each cover term could be identified by questions and by analysis of typescripts of interviews.

The simple descriptive question "What did you do yesterday?" could result in an extended reply--perhaps 15 to 30 minutes--and include such comments as "I interviewed a mother and completed an adaptive assessment". During this or a subsequent interview questions such as "How do you complete an adaptive assessment?", "Do you or other social workers use different scales or screening measures?", and "Do other support staff conduct adaptive assessments?" could be asked. From these and related questions would emerge an understanding of types and uses of adaptive assessment instruments; who completes them; why, when, where, and how they are completed; how they are scored; how information is presented; and beliefs about and feelings associated with completing this task.

## Asking Structural Questions

At this point in our study, we attempt to elicit as many cultural domains as possible. Literally dozens of these domains should emerge when we ask questions of a descriptive nature. In later interviews, we continue to ask "Grand tour" and other sorts of descriptive questions. Beyond this, however, it becomes appropriate to ask structural questions as well. What is a structural question? Two examples may suffice. First, there is the "Domain-Verification Question". This question would ask our "Dirthead" informant this sort of query: "You mentioned teachers at your school. Are there other sorts of people at your school besides teachers?" What we have done here is to use the cover term as the basis for formulating our structural question. Another sort of structural question would be an "Included Term Verification Question". An example here would be: "Are other people besides teachers 'Son of a Bitches?'" Another kind of included term verification question would be: "You mentioned four kinds of teachers. Are there any other kinds you can think of?"

## Making a Taxonomic Analysis

A taxonomy is simply a system for classifying knowledge. As we use the term, it refers to a further refinement and breakdown of the knowledge given us by our informants. Let us suppose that our informant told us that besides teachers at the school, there are other kids, the "Super", the Principal, secretaries, janitors, and, occasionally, parents. When we ask a question that refines these categories, we create a taxonomy, or rather, our informant creates one. As an example here, McKay asks her informant this question: "You said that there are kids at your school. Do Dirtheads talk about different kinds of kids?" Indeed, her informant does tell her that these are different kinds of kids as seen by "Dirtheads" (see Figure 2).

Figure 2. Kind of Kids at School as seen by the "Dirts".

| | |
|---|---|
| 1. Smart Apples | a. Super smart apples |
| | b. Not so bad smart apples |
| 2. Jocks | a. Really good at sports |
| | b. Not so good at sports |
| 3. Dirts | Always get in trouble |
| 4. Shrimps | a. Little kids |
| | b. Seven or Eighth graders |
| 5. Half in Halfs | Don't fit in any category |
| 6. Fags | Boys that should be girls |

Here we see the included terms, "kids" turned into a cover term or label, as our informant becomes more precise with his information. Informants will generally have more precise kinds of knowledge about those categories of information that are important to them. In large part, the information from informants breaks down into skills that one must have to be in a cultural scene.

To further illustrate the creation of taxonomies, the second author developed a taxonomy of one Iowa Area Education Agency school social worker's activities (see Appendix A). This taxonomy was chosen for construction after it was decided that school social worker activities seemed to "organize most of the cultural knowledge...[the] informant has learned" (Spradley, 1979, p. 136). It was constructed only after first identifying cultural domains, including cover and included terms, examining all the cultural domains, and then deciding on the criterion of "organizing domains" (p. 136) of school social worker activities. The next step was to select all those cultural domains that included activities of the school social worker. This taxonomy, though extensive, does not exhaust all the possibilities. It also does not necessarily reflect accurately all the activities of another school social worker.

## Asking Contrast Questions

Thus far in our study we have attempted to gain knowledge about the cultural scene in a junior high school by collecting a number of cultural domains from our informant. We have asked both descriptive and structural questions, and we have gained a large number of domains and taxonomies. There is yet another way to direct our questions to elicit more information about the cultural scene that we wish to study and that is by asking "contrast questions". A contrast question adds another dimension of our knowledge of the informant's world by "decomposing" the cultural domains. Spradley (1979, pp. 160-172) cites a number of questions to break down the included terms of cultural domains. This is done by asking questions such as the following:

1. "Contrast Verification Questions". This question allows the interviewer to contrast two or more included questions in terms of the differences and similarities of folk terms. We might ask our Dirthead informant how "shrimps" and Half in Halfs" are different, for example.

2. "Directed Contrast Questions". Here we would begin with a known characterization of one of the included terms and contrast it with another. Thus we might ask our informant to tell us if "Dirts" are treated differently by teachers than "Jocks".

3. "Rating Questions". These questions ask our informant to rate characterizations of the included terms by a numerical standard or by degrees of difference. For example, we could ask our informant to rank the kinds of kids from the most popular to the least.

## Making a Componential Analysis

The final task in our series of interviews is to order the information given to us via our contrast questions. This "Componential Analysis" results in the creation of a paradigm that is a two-dimensional representation of our informant's knowledge. McKay (1984) has asked her informant what kinds of kids go to junior high. She contrasts this by asking about different ways to get in trouble in class. We show the results of this question in this slightly simplified table (see Figure 3).

**Figure 3**. Ways to Get in Trouble in Class.

| | Smart Apples | Jocks | Half in Halfs | Dirts | Shrimps |
|---|---|---|---|---|---|
| 1. Talk in class | x | x | x | x | x |
| 2. Don't do work | | x | o | x | o |
| 3. Use dirty words | | x | o | x | o |
| 4. Be late | o | o | o | x | o |
| 5. Give teachers a bad time | o | x | o | x | |
| 6. Throw stuff at teachers | | | | x | |
| 7. Fight | | x | | x | x |
| 8. Stand by teachers' Desk | o | o | o | o | o |

KEY: x = do this a lot; o = do this sometimes

Paradigms are useful ways to describe similarities and differences among a contrast set, for example, activities of AEA support staff. One paradigm constructed by the junior author contrasts the activities of the support staff for one AEA (see Appendix B). Note that this paradigm represents the beliefs of one school social worker and one way of constructing reality.

This paradigm was contructed by using a technique, the "Contrast Set Sorting Questions" suggested by Spradley (1979, pp. 168-169). The second author wrote each folk term (e.g., school psychologist) on 12 cards. These cards were spread out on a table and the informant was asked: "Would you place these cards into two or more piles as to how support staff are alike or different". This process can be repeated as many times as the informant can make differentiations. In this case the informant made 13 differentiations. Subsequent analysis reduced the contrasts to 10.

## Discovering Cultural Themes

After one has gone through the necessary interviews to complete all of the domains, taxonomies, and paradigms that we have discussed, it becomes necessary to ask oneself about the meaning or usefulness of the ethnograph. The development of a cultural theme attempts to answer that question. In one sense the cultural theme is a unifying principle that holds the cognitive world of the informant together. It is often based on hidden or tacit assumptions which are not fully articulated by the informant. Cultural themes often revolve around power or conflict. Sometimes themes emerge as a contradiction between what people say and what they, in fact, do. The development of a theme is akin to that of a scientific theory, in that it attempts to explain and predict the future. Cultural themes, unlike many varieties of social theory, always emerge only after the data are collected. From the examples given earlier in the paper, McKay elaborated the theme that for the culture of "Dirtheads", the central idea is that institutions such as schools deal unfairly with individuals that are not in popular groups. The theme of this "unfairness" colors much of the perceptions and actions of the Dirthead subculture.

## Writing the Ethnography

The method for writing up the Ethnographic report will be determined by the needs of the researcher, and these needs may vary greatly. For the school social worker involved in such research, sharing ideas with colleagues and other professionals would be, of course, extremely useful. If this is the case, it would follow that one would need to produce Ethnographic research that is accessable and free of all jargon with the natural exception of the native language terms of one's informant.

In addition to the chapters in Section Four of the handbook, readers are encouraged to study Spradley's (1979) chapter on "Writing an Ethnography" and to read the relevant portions of Bogdan and Biklen (1982), Hammersley and Atkinson (1983) and Lofland and Lofland (1984).

## Conclusion

A brief description of the Developmental Research Sequence has been presented. Applications have been applied to a school setting and to the specialty of school social workers to provide examples of output resulting from different levels of analyses. For the school social worker, the ethnographic interview can reveal a great many things of import in understanding the cultural world of students. It does not directly delve into the emotional life of the child but it is an excellent tool for understanding the cognitive patterns and norms of students, especially those parts of it which is shared with other children and kept secret from adults.

In sum, the ethnographic interviewing technique can best be learned by practice. We recommend Spradley's The Ethnographic Interview as an excellent sourcebook in learning the techniques and methods of the interviewing process.

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## Footnote

[1] For a brief discussion of fieldwork roles refer to a basic research textbook such as Monette, Sullivan, and DeJong (1986). For more extensive discussions see Adler and Adler (1987), Fine and Glassner (1979), Hammersley and Atkinson (1983), Lofland and Lofland (1984), and Snow, Benford, and Anderson (1986).

## Appendix A

Figure 3. Taxonomy on The Activities of One School Social Worker in an Iowa Area Education Agency*

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### ESTABLISHING MYSELF IN THE SCHOOLS WITH EVERYBODY

I. Working with Teachers
  A. Building Relationships
    1. Give teachers a lot of feedback when worker does observation
    2. Put myself kind of one down by letting teachers know
      a. how difficult it is for me to handle groups
      b. how I respect their skills
      c. how I feel they can manage the kids better than I can
      d. ask her advice with problems I had during a group
  B. Establishing Credibility
    1. Share insights that they might not have about their students
    2. Give teachers ways to respond to different unusual situations
      a. child has a grandmother die
      b. parents going through a divorce
      c. child exhibits bizarre behavior
      d. child has a crazy parent
      e. child comes from a family where there's alcoholism
      f. child has parent laid off

II. Ways to Have a Good Relationship with the Secretary in Every School
  A. Be courteous and nice
  B. Think about their needs
  C. Let them know
    1. Where you are in the building
    2. When you come in and when you leave
    3. Where you are going to be

III. Getting Respect
  A. Be professional
    1. Dependable or reliable
      a. on the job on time

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*Completed by James G. McCullagh.

        - b. complete work on time
            - (1) your report will be in when it's needed
        - c. present at staffings if you said you would
    - 2. Quality interactions
        - a. knowing what's confidential
        - b. knowing what's appropriate with given people
    - 3. Professional expertise
        - a. strong interpersonal skills
            - (1) go to a home and get "stuff"
- B. Values as a person
    - 1. Having some character
    - 2. Care about children
    - 3. Your honest
    - 4. Sincere
- C. Willing to put yourself out by
    - 1. Coming to a meeting to be with parents late
    - 2. Following through on something that's really on your own time
    - 3. Spending your own money
- D. Do a good job
    - 1. Come up with a program that turned the kid around
- E. Be predictable
- F. They can count on you
- G. Have some skills for dealing with people
- H. Understand the dynamics
- I. Have insights that other team members do not have
- J. Be empathic toward team--"You're there struggling with everybody else to get through it"
- K. Be hard-working
- L. Be busy

IV. Responding to schools that want my services

- A. Positively
- B. Give them their fair amount of time
- C. May even cheat, take time from some place where they don't seem quite as nice

V. Responding to schools that don't utilize my services and/or don't appreciate me
    A. They don't get their fair amount of time or short change them out or reallocate your time a little bit
    B. Brings reports to write from other buildings

VI. How I elicit work in school that have special classes
    A. Develop relationships with special class teachers
    B. I do things for them
    C. I make home visits
    D. I go to parent-teacher conferences
    E. May do marginal tasks

VII. Getting included and involved when given a new school assignment
    A. Teach the principal and special class teacher what to expect from the social worker
    B. If the social worker should be on the referral then let them know

VIII. Adjusting to principals' styles
    A. Try to figure out what principals wants and needs from me and then basically try to give it to them
    B. Try to avoid conflict
        1. Don't do what they don't want me to do
        2. Recognize what some of their needs are
            a. handle difficult situations with parents
                (1) keep parents happy
                (2) make parents comfortable
            b. prepare the principal for what's (an upset, irate, concerned parent) coming in the door
            c. let the principal handle everything with parents
                (1) avoid having principals feel jealous of your relationships with parents
        3. Let them know that you have an understanding of community agencies
            a. be able to state appropriate agencies without hesitation
            b. know telephone numbers of agencies and be able to say them
            c. know names of key staff
            d. get on the phone right away and get the job done

## DOING THE WORK I'M PAID TO DO

- I. Prereferral work
  - A. Attend prereferral meeting
  - B. Talk about problem
  - C. Make suggestions to teachers
  - D. Make suggestions to parents on how to manage problem
  - E. Meet again if necessary
  - F. Go to formal referral if necessary
- II. Formal Referral Evaluation Activities
  - A. Attend referral meeting
  - B. Evaluate
    - 1. Observe child
      - a. structured
        - (1) wear head phones
        - (2) every 20" look at student and record his behavior
        - (3) then over next 20" record events
        - (4) repeat b and c
      - b. unstructured
    - 2. Interview parent(s)
      - a. in home
      - b. at school
      - c. other (e.g., restaurant)
    - 3. Complete adaptive assessment
      - a. with parent(s)
      - b. with teacher(s)
      - c. with teaching associates
    - 4. Interview child, if appropriate
    - 5. Interview teacher(s)
    - 6. Interview agency staff
    - 7. Send for agency file(s)
    - 8. Review agency file(s)
    - 9. Develop diagnostic opinion
  - C. Write report
    - 1. Write it out
    - 2. Dictate
    - 3. Type

        4. Use a word processor
        5. Write using a printed outline
    D. Attend staffing meeting
        1. Make a team decision
        2. Fill out forms
        3. Develop IEP goals
        4. Put kid on support roster

III. Make referrals to:
    A. Family doctor
    B. Department of Human Services (DHS)
    C. Private counseling agency
    D. Mental health agencies
    E. Specialized Child Health Center in Waterloo
    F. Child psychiatry in Iowa City
    G. Child psychiatry in Rochester, Minnesota
    H. Social Security Administration for SSI
    I. Private residential school
    J. Head Start
    K. Preschool programs
    L. And so forth

IV. Provide Ongoing Services
    A. Counseling directly to the student
    B. Counseling to the parents
    C. Consultation on behalf of the student to the teacher
        1. Meet with teacher
        2. Listen to problem
        3. Imagine problem
        4. Elicit their ideas and get them to come up with solutions
        5. Make suggestions
        6. Give them things to read
        7. Provide them with materials
    D. Group counseling
    E. Coordinate services in the community

V. Reevaluation
    A. Make sure kid is still eligible

- B. Read the kid's file
- C. Determine what changes need to be made in the kid's program
- D. Interview parent
- E. Complete adaptive behavior assessment
- F. Observe child
- G. Speak with teacher(s)
- H. Write report
- I. Attend staffing

## COPING: THE UPSIDE AND DOWNSIDE OF BEING A SCHOOL SOCIAL WORKER

I. How to ignore the rules, help children, change systems, and still keep your job
  - A. Ways not to complete forms
    - 1. Wait till reeval to take care of business
    - 2. Just put it off

II. Ways to kill time out in the field when there are no clients to see and no meetings to attend
  - A. Take longer lunches by self or with support staff
  - B. Start later
  - C. Leave earlier
  - D. Talk to teachers and provider staff about
    - 1. Personal selves
    - 2. Sports
    - 3. Families
    - 4. Children in program
  - E. Informally observe classrooms
  - F. Interact with children in classroom
  - G. Observe children during recreation
  - H. Drive around

III. How school social workers pass time driving around to and from home, schools, client homes, meetings, main office, community agencies
  - A. Think about work
  - B. Day dream about God knows what
  - C. Listen to music, talk shows, news
  - D. Recite prayers
  - E. Stop for

    1. Gas
    2. Lunch
    3. Snacks
    4. Directions
    5. Use of a toilet
  F. Watch for the highway patrol
  G. Ride with another team member
  H. Look at others in cars that are passing or being passed

IV. Where school social workers do their paper work
  A. Car
  B. Main office
  C. Secondary office
  D. Classroom
  E. Meeting room in school building
  F. Teacher's lounge
  G. Storage room
  H. At staffings
  I. At home

V. Ways you know you're an outsider
  A. Identify you all as a group - "You're the AEA people"
  B. Really don't get to know you that well
  C. Conversations change when you're present
  D. They have their own parties
  E. They have their own bulletin boards
  F. You're not encouraged to be a part of their activities
  G. Whatever space I have is what is absolutely left over
    1. No space
    2. Little store room
    3. Resource room
  H. Secretaries will resent you if you ask them to do too much
  I. They don't put your salary in the same bag with theirs
  J. There's a certain resentment

VI. Rewarding thing about my job
  A. Positive reinforcement from
    1. Team members
    2. Teachers

        3. Parents
        4. Children
    B. Principal really depends on me
    C. Principal wants my services
    D. I have so much power

VII. Negative feelings about my job
    A. All the forms that have to be filled out
        1. Forms get on my nerves
        2. I feel resentment about the forms
        3. I have this internal rebellion and I think everyone does
        4. Frustrating
    B. Reports that have to be written
    C. Routines they have to go through

VIII. Getting Burned Out
    A. Staying in the same assignment and request to change is denied
    B. Get bored
    C. Do the same old thing; quit being very creative
    D. Low morale
        1. Can't get excited about anything
        2. Never say anything nice
        3. Will absolutely not involve themselves in anything
    E. Same old people working together for many years
    F. Mentality of being cut back
    G. More work every year
    H. Basically the same money every year
    I. More and more expectations
        1. Many more forms
        2. More written procedures for how you are going to do something
        3. More time lines
        4. More staffings

IX. Ways to be lazy
    A. Shirk work
    B. Try to get out of everything
    C. Never volunteer for anything
    D. Not be where you're suppose to be
    E. Never say anything in staffings

Figure 4. Paradigm: Kinds of Support Staff in one Iowa Area Education Agency

| Support Staff | Dimensions of Contrast* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 |
| 1. Home Bound Teacher | 1.3 | 2.2 | 3.2 | 4.1 | 5.2 | 6.1 | 7.4 | 8.3 | 9.3 | X |
| 2. Itinerant Vision Teacher | 1.3 | 2.2 | 3.2 | 4.2 | 5.2 | 6.1 | 7.4 | 8.3 | 9.3 | X |
| 3. Itinerant Hearing Teacher | 1.3 | 2.2 | 3.2 | 4.2 | 5.2 | 6.1 | 7.4 | 8.3 | 9.3 | X |
| 4. Social Worker | 1.1 | 2.1 | 3.1 | 4.1 | 5.1 | 6.3 | 7.2 | X | 9.1 | 10.1 |
| 5. Psychologist | 1.1 | 2.1 | 3.2 | 4.3 | 5.1 | 6.3 | 7.2 | X | 9.1 | 10.1 |
| 6. Consultant | 1.1 | 2.1 | 3.2 | 4.2 | 5.1 | 6.1 | 7.3 | X | 9.4 | 10.1 |
| 7. Audiologist | 1.3 | 2.2 | 3.2 | 4.3 | 5.1 | 6.2 | 7.4 | 8.1 | 9.1 | 10.2 |
| 8. Special Ed Nurse | 1.3 | 2.2 | 3.1 | 4.1 | 5.2 | 6.2 | 7.4 | 8.2 | 9.2 | 10.2 |
| 9. Physical Therapist | 1.2 | 2.2 | 3.2 | 4.2 | 5.1 | 6.2 | 7.4 | 8.2 | 9.2 | 10.2 |
| 10. Educational Strategist | 1.1 | 2.1 | 3.2 | 4.3 | 5.2 | 6.1 | 7.1 | X | 9.1 | 10.1 |
| 11. Speech Clinician | 1.3 | 2.2 | 3.2 | 4.3 | 5.1 | 6.2 | 7.4 | 8.1 | 9.1 | 10.2 |
| 12. Occupational Therapist | 1.2 | 2.2 | 3.2 | 4.2 | 5.1 | 6.2 | 7.4 | 8.2 | 9.2 | 10.2 |

*See key on next page.

## Dimensions of Contrast

1.0 Observe child in classroom

  1.1 Most commonly

  1.2 Sometimes

  1.3 No

2.0 Interview child

  2.1 Yes

  2.2 No

3.0 Interview parent above for data gathering

  3.1 Yes

  3.2 No

4.0 Home Visits (School age programs)

  4.1 Usually

  4.2 Sometimes

  4.3 Almost never

5.0 Likely to be on a team planning the program of a child in a special class

  5.1 Yes

  5.2 No

6.0 Primary focus of support staff

  6.1 Instructional services

  6.2 Services to physical (external, bodily) needs of student

  6.3 Work with behavior

7.0 Basic team

  7.1 First level only

  7.2 First and second level

  7.3 Second level only

  7.4 Not a core member

8.0 Extent of Other Support Staff Involvement with Basic Team

  8.1 More often

  8.2 Less likely

  8.3 Unlikely

9.0 On a first level evaluation

  9.1 Most likely

9.2 Next likely

9.3 Somewhat likely

9.4 Can't be

10.0 Interview teacher

10.1 Yes

10.2 No

# SECTION THREE

# RESOURCES FOR RESEARCH

# USING THE LIBRARY IN PRACTICE-BASED RESEARCH

Stanley P. Lyle

ABSTRACT: Suggestions to busy practitioners on how to make effective use of library services and collections such as reference, document delivery, and government publications are presented. Also discussed is the library research process, including use of tools to identify pertinent books, journal articles, dissertations, and other publications. A final section explains how to use libraries to identify experts.

Libraries of all types, whether school, university or public, work to meet the needs of their clients by providing appropriate printed and computerized materials and services to access these materials. Practitioners who fully utilize the various library systems will find a wealth of information to help them do a better job in working with their clientele. Through tools found in libraries one can identify instruments and methods used in the past to study a particular problem; given the cumulative nature of research, such a review of published literature can make for a more efficient and effective study of a current problem.

Libraries provide tools for identifying relevant studies as well as the studies themselves in some cases. However, no library collection includes all source documents. Therefore, practitioners will want to understand how to use their local library's services and resources to identify and obtain publications and experts beyond the local community. Practitioners also will want to recognize the existence of other libraries in their metropolitan areas or regions which may be of great value in work on a given research project.

This chapter starts with an overview of selected library services and resources. Next is a discussion of guides to the literatures of social work and the social sciences in general. The bulk of the chapter describes how to find various kinds of information and types of publications and how to obtain copies of desired source documents (not always an easy or convenient task).

## Selected Library Services and Resources

Practitioners should be sure they fully understand and utilize their own organization's services and resources. After all, their own library will be most sympathetic to and understanding of their particular needs, and their own organization may pay for some or all of the expenses associated with library research.

### Reference

Most libraries have a reference desk or librarian designated as reference librarian. Practitioners should turn to this service when experiencing difficulty in finding specific information or in locating materials within the library. Reference librarians can be most helpful when approached with a specific, clear request for information. Depending upon the nature of the library and volume of inquiries, the reference librarian may be able to find an answer to a question, but in other cases may be able only to refer to particular reference books, indexes, and abstracts--leaving the digging to the researcher.

Many libraries, particularly those at colleges and universities, offer computerized literature search services; these are often housed within the reference department. Such services usually involve working with a librarian, but some libraries provide access to "do-it-yourself" search services offered by database vendors such as BRS and DIALOG. Some finding aids are available only in print, but others, like ERIC, are available in print, in an online, computerized format, and in a new laser disk format called CD-ROM. Smaller libraries may have access to particular indexes only in computerized format and not in print. While computerized searching is most common in academic libraries, libraries of other types are involved, too. A fee is usually charged for online searches; fees are less common for searches of a given database on CD-ROM. University and other libraries may allow researchers not affiliated with the university to utilize their online search service. Access and charge policies vary, so checking around is a good idea: Some organizations pay for online searches conducted by their members or employees.

### Government Publications

Whether issued by international, federal, or state units, publications of the executive, legislative, and judicial branches can be vital information sources for the practitioner. United States documents depositories usually occupy a separate section in university and public libraries. Publications in such depositories typically are arranged not by Dewey or Library of Congress call numbers but instead by the Superintendent of Documents classification scheme. This scheme arranges publications by issuing agency so that items produced by the Department of Health and Human Services, for example, are shelved together.

Practitioners should recognize that more and more federal government publications are distributed in a microfiche format. Practitioners also should note that many government data files are available in floppy disk and tape formats for computer analysis. Various finding tools, described later in the chapter, aid in identifying pertinent sources, regardless of format.

### Document Retrieval

After identifying pertinent articles, dissertations, and other publications with the help of indexes, databases, and other reference tools, the next step is to obtain the cited documents. Most libraries produce a list of periodicals to which they subscribe. If the local library does not subscribe, one might ask the reference or interlibrary loan librarian for lists of periodicals held by other libraries in the metropolitan area or region. Perhaps, for example, the local university library does not have a given school social work journal; maybe another university library nearby *does* subscribe. Before making a special trip to use another library with which the practitioner is not affiliated, s/he may wish to call the librarian there to ask permission and to ask if the desired journal issue or other publication is available.

## Guides to the Literature of Social Work

Guides to the literature of a given field serve to list and describe its fundamental research sources. Mendelsohn (1987), for example, has written a guide to social work sources which explains how to use dozens of research tools. For the various subject areas of the discipline, he discusses reference books, journal and newspaper articles, computerized literature retrieval, government publications, statistics, and books. Other important guides or bibliographies are by Webb (1986), by Conrad (1982), and by McCullagh (in this handbook).

Practitioners beginning work in an unfamiliar area might keep in mind the role played by textbooks. These publications summarize and synthesize findings and as such serve to provide quick overviews and references to classic studies.

## Beginning Research in the Library

Literature guides and textbooks point to relevant finding tools and source documents. Practitioners may wish to consult such reference books peculiar to their discipline when beginning work in order to obtain an overview of a new or unfamiliar topic. Tools like The Social Work Dictionary (Barker, 1987) provide short, specialized definitions of terms used in the discipline. Specialized encyclopedias like the Encyclopedia of Social Work (NASW, 1987) provide articles, with references, on social work topics written by experts in the field.

Literature guides cite classic works and bibliographies of such works. Other important tools such as Bibliographic Index: A Cumulative Bibliography of Bibliographies (3 per year) list bibliographies by subject which have appeared as parts of articles or books or which have been published separately. Another way to identify bibliographies available in the local library is to check the card catalog or online public access catalog (computerized card catalog). Book-length bibliographies are listed under the appropriate subject heading with a bibliography subheading (e.g., Child Abuse--Bibliography).

At any time during the course of a research project a need for statistical data may arise. The first stop for many statistical questions is the Statistical Abstract of the United States: National Database and Guide to Sources (annual), produced by the United States government. Statistical Abstract reprints tables or parts of tables which have appeared in various U.S. government publications. The sources of the information are indicated at the bottom of each table; the original source may have more detail. Statistical Abstract covers virtually all subject areas; other statistics tools such as Digest of Education Statistics (annual) provide tables and charts on particular subject areas. In addition to compilations of statistics are reference works whose purpose is to help the practitioner locate statistical data published in federal government and private sources. Such statistics finding tools include American Statistics Index (monthly) and Statistical Reference Index (monthly).

### Identifying Pertinent Books and Similar Publications

As mentioned above, books available in a local library are listed in the card catalog under author, title, and subject. Online public access catalogs where available are a powerful new searching tool which indicates books held by the local library, and, in some cases, books held by cooperating state universities, community colleges, public libraries, or similar institutions in other parts of the state or region. Some libraries with online catalogs allow dial access to their database; this means that an individual with a terminal and a modem, even though hundreds of miles from a large state university library, for example, may be able to use the telephone to gain access to the library's database and determine what books are available there.

To identify pertinent books which are not available locally the practitioner may wish to consult regularly published booklists, as well as previously mentioned bibliographies, which list books by author, subject, and sometimes by title. Such reference tools include Books in Print (annual) and Cumulative Book Index (monthly). These and similar booklists are also available in computerized formats.

### Identifying Pertinent Journal and Newspaper Articles

If the practitioner already has pertinent article citations in hand, the research task becomes one of calling or visiting an area library or utilizing other delivery services provided by the practitioner's employer. University libraries produce lists of their periodical holdings which can be checked. As mentioned earlier, libraries within a given metropolitan area or region may have traded lists of periodicals or produced a "union list" showing holdings of particular libraries in the region. Such a list can help researchers to make the most of their time when planning trips across town or elsewhere in the region.

If the practitioner does not already have pertinent article citations in hand, s/he will want to consult indexes and abstracts, whether in paper or computerized format. Indexes and abstracts usually list publication citations by subject and by author. Abstract services, unlike indexes, include summaries of listed publications. Important tools for social work practitioners include Social Work Research & Abstracts (quarterly), Sociological Abstracts (5 per year), Social Sciences Index (monthly), Current Index to Journals in Education (monthly), Psychological Abstracts (monthly), and Criminal Justice Periodical Index (3 per year). Library collections also usually include indexes to major national and local newspapers. These and more specialized indexes and abstracts are likely to be available at any university library, whether in print, online, or CD-ROM formats.

## Identifying other Publication Types

### Government Publications

Indexes such as Monthly Catalog of United States Government Publications list thousands of government documents by subject, author, and keyword. Other important indexes are CIS Index to Publications of the United States Congress (monthly) and Index to U.S. Government Periodicals (monthly). As with periodical indexes, interesting citations from these must be checked against library records, such as the "shelflist," to determine if held locally. These and other indexes are available as online databases through national database vendors like DIALOG and BRS. Other government data files and "bulletin boards" of potential interest to social workers may be available through direct dial computer access. Use of a documents depository collection can be a daunting prospect; consult your documents librarian for assistance.

### Dissertations

Dissertations are listed by subject in numerous specialized bibliographies and indexes. The standard source for identifying doctoral dissertations on a given subject, though, is Dissertation Abstracts International (monthly). Finding dissertations on a specific topic can be a very time consuming process. Practitioners may wish to consider a computerized search, which allows searching for specific words and phrases in titles and abstracts.

### Legal Materials

University libraries, particularly those associated with law schools, are likely to have strong collections of federal and state statutes, regulations, and case decisions. However, if the university library does not have a needed court case reporter, the practitioner may wish to contact other organizations in the area. The county courthouse, for example, may house a legal collection which can be used by the public.

## Obtaining Source Documents

A large university library is likely to have a high percentage of publications identified with the help of reference tools. However, no library has it all. As mentioned earlier, utilize all libraries in your area. Practitioners will also want to investigate document delivery services available through their employer. Some organizations such as the Iowa Area Education Agencies provide convenient, well-developed delivery services (see the chapter in this handbook by Schrader).

An alternative is the interlibrary loan service offered by most libraries. To use this service, practitioners typically must complete a form indicating details for the desired publication. A source of reference usually is requested. Turnaround time is likely to be two weeks or more. Some libraries around the country offer "express" services for a fee which may range from a few dollars to $20 or more depending on the delivery company and courier service utilized.

Price and eligibility policies vary from library to library and from organization to organization. Practitioners are certainly eligible to use their own organization's and their public library's service. Practitioners who are not enrolled students are not likely to be eligible to use a university's loan service, but might want to check anyway. Most types of publications can be obtained through interlibrary loan. Difficulties may be encountered, though, in trying to borrow reference books, new books, dissertations, and other "special" forms.

## Finding Experts

Busy practitioners may wish to interview experts over the telephone or in person to speed up the research process. Library reference collections include tools that can help to identify experts and their addresses and telephone numbers.

### Government Officials

Most library collections include directories of state and federal government agencies and personnel. Names, addresses, and telephone numbers are usually provided in such sources. Important federal directories are United States Government Manual (annual), Congressional Yellow Book (quarterly), and Federal Yellow Book (quarterly). Middle level employees are sometimes listed. Ask your reference librarian about state directories.

### Professional Associations

Thousands of associations exist to serve the interests of people and organizations working in particular areas. Associations may sponsor or conduct research; in any case, a given national association is likely to have on staff a researcher who is knowledgeable about the association's general area of interest and able to identify experts, key publications, and other resources the practitioner may wish to tap. How does one identify such associations? A standard reference source is Encyclopedia of Associations (annual). Each organization's entry in this source includes a one paragraph description of the organization, its address and phone, the head of the organization, and a brief list of its publications.

### Other Experts

Reference collections include other types of directories which give addresses and phones for various categories of people and organizations. Ask at the library's reference desk for assistance.

## Conclusion

Whether tracking down experts, searching online databases, or plowing through print indexes, practitioners should approach the research task with the attitude that the needed information can be found. While the expenses and time delays associated with research can be frustrating, persistent, thorough, and creative work can yield serendipities as well as the expected.

## ABOUT THE AUTHOR

Stanley P. Lyle is reference librarian and online search coordinator at Donald O. Rod Library, University of Northern Iowa. Lyle's interests include business research, computerized literature retrieval, and economic development. He has published in journals such as *Scholarly Publishing*, *RQ*, and *Journal of Industrial Teacher Education*. He holds an M.A. in library science from the University of Iowa and an M.B.A. from the University of Northern Iowa.

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# CONDUCTING RESEARCH THROUGH ONLINE COMPUTER DATABASES

Susan I. Schrader

ABSTRACT: This chapter serves as a practical resource guide for conducting research through online computer databases. The Area Education Agency Media Centers provide access to this research to school social workers and other educators in Iowa. Research can be conducted for current awareness, problem solving, surveying literature, etc. Twenty-one databases that have information relevant to school social work are summarized.

Mention the word "research" and many educators think of the hours spent in a university library looking through indices, going to a shelf to find a periodical, and then looking through the indices again because the periodical wanted is checked out, lost, or at the bindery. Mention the words "computer" and "research" together and many educators become uncomfortable with the idea of using new or unfamiliar technology. Mention the words "online computer database searching" and many educators shrug their shoulders and say, "What?"

For an educator, practitioner, or researcher, online computer database searching is a sophisticated and efficient way to do research. You need not spend hours in the university library looking at indices and card catalogs. In fact, you don't need to even go to the library. Research can be done for you by contacting your Area Education Agency (AEA) Media Center or university library.

## Why Do Research?

The primary reason for doing research is to avoid "reinventing the wheel." If you want to implement a new program in the high school for potential dropouts, it would be helpful to do some research to find out what dropout programs are already in place and which ones have been successful. If you want to find out how one-parent families are affecting children's social interaction in school, why not do research to learn what studies already have been done. To answer specific questions or problems, to find background information, or to survey the literature, you should always consider doing a computer database search first.

## What Is Online Database Searching?

Let's define some terms. Online means that a microcomputer is connected to another computer, in this case a mainframe, through telephone lines. A modem and communications software are needed so that the microcomputer can dial the telephone and "talk" with the mainframe. Database refers to the information that is stored by subject area in a computer (e.g., ERIC). Searching refers to the interaction between the person at the microcomputer and the mainframe.

There are hundreds of databases available and dozens of companies or vendors that sell access to these databases. Databases are produced either for profit by various companies or as part of a government agency or university. DIALOG, Inc., based in Palo Alto, California, is the largest computer vendor in the world with over 300 databases available for searching. BRS (Bibliographic Retrieval Service), based in Latham, New York, is another large computer vendor. Some databases such as ERIC (Educational Resources Information Center) are available through both DIALOG and BRS.

## Advantages of Online Searching

Online computer database searching allows you to search through resources not available locally. Specialized indices, international papers, conference papers, research studies, etc., are often not purchased by many university or public libraries or AEA media centers because they are either too expensive or would not have broad enough usage. However, they are available online.

Online searching reduces the time spent looking through print indices. A 15 minute manual search can be done online in two or three minutes. More of your valuable time can also be saved by having the AEA media specialist who is trained in online database searching do the searching for you. A review of the literature can be in your hands in just minutes!

## How To Request a Search

Call the Area Education Agency Media Center in your service area to ask for an online computer database search. A call is preferred over a written request because the media specialist will have specific questions to ask about the search topic during the reference interview. For example, the topic may be substance abuse. Here are some questions the media specialist may ask: What age child? Drug or alcohol abuse? Which drugs: crack, marijuana, speed? Treatment programs? Psychological characteristics of abusers? Community programs? Family responsibility? Violent behaviors? Abuse prevention programs? Impact on the family or siblings? Environmental or genetic influences? School's role? Effect on learning, attendance, socialization? Hospital outpatient programs? Followup-studies? Current information from the past year or older information?

When requesting an online computer database search, the media specialist will need to know exactly what you want to know. The topic will be discussed so that the broadest and narrowest interpretations of the topic will be defined in the search strategy. Identifying the two extremes of the topic is important because there may be too little information on the topic and the search strategy will need to be expanded or there may be too much information and the topic may need to be narrowed.

Databases can be searched using controlled vocabulary terms such as desciptors or free-text language. The media specialist will choose the descriptors or terms. If there is jargon or new terminology, let the media specialist know.

Computer database searches provided by the AEA Media Centers are free of charge to Iowa educators when the research is directly related to improving teaching and the classroom experience. Computer database searches are also available at university libraries and at public libraries for a fee.

## Search Strategy

The search strategy is usually formulated by the AEA media specialist. The separate components of the search topic are identified. The search strategy itself includes appropriate descriptors or free-text terms, special commands unique to the database being searched, limitations such as year, and commands that allow the use of Boolean logic (to be explained later).

The following illustration shows a sample search strategy for the topic of prevention programs for teen runaways. The chart lists the terms and descriptors that will be combined using the Boolean logic operators, AND, OR, and NOT.

RESTRICTIONS: ERIC database--for the period 1980 to the present

SEARCH STRATEGY:

| programs | runaways |
|---|---|
| prevention | runaways |
| delinquency prevention | |
| programs | |

### Boolean Logic

Besides the time saved by online searching and the unique types of information available in a computer database, there is the advantage of using Boolean logic. Unlike a print index, several terms or concepts can be searched in rapid succession and then set aside and combined by using the commands: AND, OR, NOT. The topic in the previous section would use this strategy: (prevention OR delinquency prevention OR programs) AND runaways. Teenager is an implied concept (most runaways are teens) and is not used as a search term because the search results would be too limited.

### Sample Search

Here is the same topic run in the ERIC database. Note the number of "hits" for each individual term and the final number of "hits" retrieved after combining the terms with Boolean operators. The 53 "hits" refer to individual documents, papers, reports, journal articles, etc.

```
    Set     Items     Description
? SS (PREVENTION/DE,ID OR DELINQUENCY PREVENTION OR PROGRAMS/DE,ID) AND
RUNAWAYS/DF,IF
    S1      4913      PREVENTION/DE,ID
    S2      496       DELINQUENCY PREVENTION
    S3      98019     PROGRAMS/DE,ID
    S4      150       RUNAWAYS
    S5      53        (PREVENTION/DE,ID  OR  DELINQUENCY  PREVENTION  OR
                      PROGRAMS/DE,ID) AND RUNAWAYS
```

### What You Will Receive

All records retrieved have a citation that includes author, title, journal, publisher, sponsor, date, pages, etc. Many records also include a short abstract that summarizes the entire document. Abstracts will be sent if available. The search results are sent in a packet that includes the following: an information sheet for ordering full text of documents, an order form, a description sheet for each database searched, and a cover letter listing the descriptors or free-text terms used.

### Turnaround Time

Turnaround time ranges from 10 minutes to one week. If information is needed immediately, a search can be conducted and the citations or abstracts or complete documents will be printed online and given to you while you wait. Search results can also be sent to your school or office the same day through the Iowa electronic mail service, EDCOM (EDucational COMmunications in Iowa). In addition, you can request a search and have the citations and abstracts sent to you in the U.S. Mail or AEA van delivery.

If information or research is not needed immediately (within a week), citations and abstracts are ordered offline from DIALOG or BRS and then delivered in the U.S. Mail. It is cheaper to order offline than to print the abstracts while online. The mail delivery from DIALOG and BRS is about one week. The media specialist who conducted the search then has the opportunity to review the search and indicate which documents can be obtained through the AEA Media Center and which documents need to be ordered through interlibrary loans. Instructions and order forms for requesting documents are included with each search.

## Document Retrieval

After reading the abstracts and determining which complete documents are required, there are several routes that may be taken depending upon the nature of the documents. For example, many searches will be done in the ERIC database. Nearly all ERIC documents are available on microfiche from the Iowa Department of Education (DOE) at no charge. Many AEA Media Centers will loan you a portable microfiche reader. Nearly all ERIC journal articles are available from the AEA Media Center or the Department of Education at no charge. Fill out and return the order form included with the search to request copies of documents on microfiche or paper copies of journal articles. If documents or articles are not available from the DOE or AEA, interlibrary loan through the AEA Media Center, public or university library can be used.

In addition, there are occasions when copies of the microfiche may be needed in paper copy. Paper copies may be obtained from the following sources: (1) The AEA Media Center may make copies from microfiche (there may be a limit on the number of pages that may be copied); (2) Paper copies of entire documents may also be requested from the ERIC Document Reproduction Service, 3900 Wheeler Avenue, Alexandria, Virginia 22304-5510. There is a charge for copies from either source.

Dozens of organizations will copy articles or supply documents for a fee. University Microfilms International (UMI), 300 N. Zeeb Road, Ann Arbor, Michigan 48106 is the primary source for copies of dissertations/master theses and journal articles. Many specialized computer databases have their own suppliers of documents, again for a fee. These copy and delivery systems are so sophisticated that you can order the documents needed while still searching online--no forms to complete and no phone calls to make. The turnaround time is just a few days.

## Databases

The databases listed in Appendix A contain information helpful to school social workers. The databases are available either through the DIALOG or BRS vendors. These databases are available for searching at the AEA Media Centers and university libraries.

## Conclusion

In today's Information Age it is difficult to keep current with the research in the social work field. Social workers need to be knowledgeable in such diverse areas of psychology, sociology, educational psychology, and medicine. How can a social worker keep up? There are no easy solutions, but online database searching will help you find specific information to fit a specific situation. The key is to know where to go when you need information or research and how to ask for it.

## ABOUT THE AUTHOR

Susan Schrader has been doing research for consultants, teachers, administrators, and secondary school students through the DIALOG, BRS, and The SOURCE online computer systems since 1975. She has a B.A. in English and an M.A. in Library Science from the University of Northern Iowa. Her current position is Coordinator of Reference and the Professional Library at Heartland Education Agency 11, 6500 Corporate Drive, Johnston, Iowa 50131.

# Appendix A

## Databases

AIDS

1983 to the present; 2,000 records; updated monthly

Producer: Bureau of Hygiene and Tropical Diseases, United Kingdom

This is the first database to specifically cover the medical research related to AIDS. Nearly every record contains an abstract. Over 50% of the database is from American research and literature.

CHILD ABUSE AND NEGLECT

1965 to the present; 15,693 records; updated semiannually

Producer: National Center on Child Abuse and Neglect, U.S. Department of Health and Human Services, Washington, D.C.

Included in this file is information of use to program planners, policy makers, and the general public relating to the identification, prevention, and treatment of child abuse and neglect. Some of the major areas covered are: definitions of abuse and neglect; reporting procedures, etiology; training programs; social and economic factors; policy making; service programs; research projects; laws; court decisions; and audiovisual materials.

DISSERTATION ABSTRACTS ONLINE

1861 to the present; 921,000 records; updated monthly

Producer: University Microfilms International, Ann Arbor, Michigan

This file is a definitive subject, title, and author guide to virtually every American dissertation accepted at an accredited institution since 1861. Masters theses have been selectively indexed since 1962. Abstracts are included, not the entire dissertation. Dissertations may be ordered directly from University Microfilms International.

DRUG INFO AND ALCOHOL USE AND ABUSE

1968 to the present: updated quarterly

Producer: Drug Information Service, College of Pharmacy, University of Minnesota, Minneapolis

This database covers the educational, psychological, and sociological aspects of drug use and abuse and alcoholism. Articles, monographs, pamphlets and instructional guides are included.

EDUCATIONAL TESTING SERVICE TEST COLLECTION

1984 to the present; updated quarterly

Producer: Educational Testing Services, Princeton, New Jersey

ETSF is an ideal source for locating tests, evaluation tools and assessment/screening devices to be used in measuring skills, aptitude, interests, attitudes or achievement.

EMBASE

June 1974 to the present; 2,999,000 records; updated every two weeks

Producer: Excerpta Medica, Amsterdam, Netherlands

EMBASE is one of the leading sources for literature on human medicine. It consists of abstracts and citations of articles from over 4,000 biomedical journals published throughout the world. An outstanding feature of this file is its complete coverage of articles on drugs.

ERIC (EDUCATIONAL RESOURCES INFORMATION CENTER)

1966 to the present; 605,000 records; updated monthly

Producer: National Institute of Education, Washington, D.C., and ERIC Processing and Reference Facility, Bethesda, Maryland

ERIC is the complete database of educational materials and research. ERIC consists of two subfiles: (1) Resources In Education (RIE), which includes documents; and (2) Current Index to Journals in Education (CIJE), which includes indexing to 750 journals. All records include informative abstracts. Subject coverage: adult, career, and vocational education; counseling and personnel services; elementary and early childhood education; educational management; handicapped and gifted children; higher education; information resources; junior colleges; languages and linguistics; reading and communication skills; rural education and small schools; science, math, and environmental education; social studies/social science education; teacher education; tests, measurement, and evaluation; urban education.

EXCEPTIONAL CHILD EDUCATION RESOURCES

1966 to the present; 62,100 records; updated monthly

Producer: The Council for Exceptional Children, Reston, Virginia

This is a comprehensive database concerned with published and unpublished literature on the education of handicapped and gifted children. The following types of materials are abstracted: books, monographs, literature guides, legislative documents, journal articles, administrative policy manuals, newsletters, curriculum guides, program descriptions, teaching guides, research reports, conference reports, nonprint professional media, and some doctoral dissertations.

FAMILY RESOURCES

1970 to the present (non-journal items), 1973 to the present (journals); 87,000 records; updated monthly

Producer: National Council on Family Relations, St. Paul, Minnesota

This database covers the psychosocial literature related to the family, including the disciplines of medicine, psychology, sociology, and education. Subject areas include: marriage and divorce, family trends and changes, organizations and services to families, family relationships, sexual attitudes and behavior, and therapy and education. Over 1,200 journals, books, audiovisual materials, government documents, newsletters, instructional materials, and directories are indexed.

LEGAL RESOURCE INDEX

1980 to the present; 277,000 records; updated monthly

Producer: Information Access Company, Belmont, California

Over 750 law journals and six law newspapers and legal monographs are indexed cover-to-cover. It provides subject, author, case name, and statute name. For attorneys and lay persons.

MAGAZINE INDEX

1959 to March 1970, 1973 to the present; 1,791,000 records; updated monthly

Producer: Information Access Company, Belmont, California

More than 435 popular American and Canadian magazines are indexed. Over 100 of these magazines have the actual full article available online. Subject areas covered: current affairs, performing arts, sports, recreation and travel, consumer product evaluations, science and technology, cultural events, business, education, science and technology, health, medicine, social science, environmental issues, regional news, economics.

MEDLINE

1966 to the present; 5.2 million records; updated monthly

Producer: U.S. National Library of Medicine, Bethesda, Maryland

MEDLINE indexes articles from over 3,200 international journals and covers virtually every subject in the broad field of biomedicine. Subject areas covered: clinical and experimental medicine, communication disorders, psychiatry, and psychology, public health, behavioral and mental disorders, nutrition, anatomy, etc.

### MENTAL HEALTH ABSTRACTS

1969 to the present; 469,000 records; updated monthly

Producer: National Clearinghouse for Mental Health Information, National Institute of Mental Health, Rockville, Maryland through 1982; IFI/Plenum Data Company, Alexandria, Virginia from 1983 to the present

This international database abstracts articles from over 1,500 periodicals, books, research reports, and program data. All aspects of mental health and mental illness are covered: aging, child development, crime and delinquency, epidemiology, manpower and training, mental health services, psychiatry, psychology, psychopharmacology, sexology, and social issues.

### MERCK INDEX

1900 to the present; 10,071 records; updated semiannually

Producer: Merck and Company

Concise descriptions of chemicals and drugs are given. Topics include preparation, physical and biological properties, pharmacological actions, toxicity, and medical and nonmedical uses for chemicals and drugs.

### NATIONAL NEWSPAPER INDEX

1979 to the present; 1,241,000 records; updated monthly

Producer: Information Access Company, Belmont, California

Front-page to back-page indexing is done for the following newspapers: Christian Science Monitor, Los Angeles Times, New York Times, Wall Street Journal, Washington Post. All articles, news reports, editorials, letters to the editor, obituaries, product evaluations, biographical pieces, poetry, recipes, columns, cartoons and illustrations, and reviews are included.

### PAIS INTERNATIONAL

1972 to the present; 270,000 records; updated monthly

Producer: Public Affairs Information Service, Inc., New York, New York

This database covers the full range of the social sciences with emphasis on contemporary public issues and the making and evaluation of public policy and economic or political problems. It is international in scope and indexes periodicals; books; pamphlets; federal, state, and local government documents; yearbooks; directories; and publications of public and private agencies.

## PSYCINFO (PSYCHOLOGICAL ABSTRACTS)

1967 to the present; 551,500 records; updated monthly

Producer: American Psychological Association, Washington, D.C.

Over 1,300 journals, technical reports, monographs, and dissertations are indexed that cover the areas of psychology and related disciplines. Subject coverage: personality, physical and psychological disorders, intervention, psychometrics, social processes and issues, treatment and prevention.

## SOCIAL PLANNING/POLICY AND DEVELOPMENT ABSTRACTS

1979 to the present; 20,000 records; updated biannually

Producer: Sociological Abstracts, Inc.

SOPODA is a unique database offering practitioners and social problem researchers access to detailed abstracts that offer solutions to problems. The materials abstracted here are not theoretical or methodological. Topics addressed: population explosion, decision-making processes, quality of life, social welfare services and professionals, family therapy, child development, etc.

## SOCIAL SCISEARCH

1972 to the present; 1,666,000 records; updated monthly

Producer: Institute for Scientific Information, Philadelphia, Pennsylvania

This is a multidisciplinary database indexing the 1,500 most important social sciences journals and 3,000 additional journals in the natural, physical, behavioral, and biomedical sciences. Articles indexed in this database have been carefully selected in order to provide the most important literature in the social sciences published worldwide.

## SOCIAL WORK ABSTRACTS

1977 to the present; 37,000 records; updated quarterly

Producer: National Association of Social Workers, Inc.

Over 150 social work journals are abstracted along with many dissertations. Topics include aging, alcoholism and drug abuse, crime and delinquency, economic security, employment, family and child welfare, health and medical care, housing and urban development, mental health, mental retardation, and schools. Also included are social policy, social work service methods, and social work professional issues.

## SOCIOLOGICAL ABSTRACTS

1963 to the present; 177,766 records; updated three times a year

Producer: Sociological Abstracts, Inc., San Diego, California

This database corresponds to the printed index of the same name. Over 1,200 journals are indexed. Subject areas include: methodology and research technology; history and theory of sociology; group interaction; cultural and social structure; social change and economic development; mass phenomena; social differentiation; rural and urban sociology; the family and social welfare; community development; studies in violence and power; women's studies; welfare services; social development; and evaluation research.

# SCHOOL SOCIAL WORK:
# A BIBLIOGRAPHY OF BOOKS

James G. McCullagh

The literature on school social work begins in the early twentieth century with the emergence of the first visiting teachers in New York City, Boston, and Hartford, Connecticut in 1906-1907. There is a richness to the literature as it has developed and been disseminated through books and pamphlets, journal articles, dissertations and theses, conference proceedings, and governmental reports. Considerable work has already been done in compiling school social work literature as noted in the bibliography of bibliographies that follows.

Practitioners can build on the work of others by awareness of the literature on school social work and knowledge of how to access relevant sources (see chapters in this handbook by Schrader and Lyle) that pertain to their research and writing. The bibliography of bibliographies lists various documents that taken together include much of the school social work literature. Bibliographies that are not readily available can be obtained through interlibrary loan. Recent journal articles can be accessed by using such abstracts as Social Work Research & Abstracts.

This chapter also includes a listing of books, categorized by type of publisher, pertaining to school social work in the United States, though a few sources are included that relate to Great Britain. Though not comprehensive this listing provides immediate access to many published sources. This bibliography excludes chapters on school social work found in standard textbooks on social work, social services, social welfare, and pupil personnel services. Such sources are numerous and easily obtained. Similarly excluded are articles in yearbooks and encyclopedias in social work, education, and the social sciences. Some government documents are included, but for a more complete listing see Fisher (1979, 1981), Sutherland (1960), and Bilger, DeTore, Maida, Sylvestre, and Waddell (1964). Considerable effort was made, however, to include local and state documents and especially Iowa monographs published in recent years. Finally, only sources that the author could review are included in this bibliography.

Some documents in this bibliography are available through the Educational Resources Information Center, or ERIC system. Each document has a unique ED number (e.g., ED 123 456). One only needs to know the ED number to obtain a microfiche copy at any library that subscribes to ERIC.

Citations to book reviews have been included for many of the books on school social work. Reviews ideally provide accurate description and analysis. Such information may be useful in determining whether a book is relevant and should be obtained. Brief or unsigned reviews were excluded.

For those interested in locating book reviews for related areas of interest, a number of social work journals regularly publish reviews, including *Social Work*, *Social Service Review*, *Clinical Social Work Journal*, *Social Casework: The Journal of Contemporary Social Work*, *Social Work in Education*, and *School Social Work Journal*. Two disciplinary journals that only include book reviews are *Contemporary Sociology* and *Contemporary Psychology*. A number of indexes also can be consulted: *Book Review Index*, *Book Review Index to Social Science Periodicals*, *Chicorel Index to Mental Health Book Reviews* (previously the *Mental Health Book Review Index*), *The National Library Service Cumulative Book Review Index*, *Combined Retrospective Index to Book Reviews in Scholarly Journals, 1886-1974*, *Education Index*, and the *Book Review Digest*.

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Lyons, K. H. (1973). *Social work and the school: A study of some aspects of the role of an education social worker*. London: Her Majesty's Stationery Office. BR: Saltmarsh, M. (1974). *Social Work Today*, *4*, 652.

Pearman, J. R., & Burrows, A. H. (1955). *Social services in the schools*. Washington, DC: Public Affairs Press. BR: Brown, F. J. (1955) *Annals of the American Academy of Political and Social Science*, *301*, 233. Butt, W. (1956). *Michigan Education Journal*, *33*, 415. Colteryahn, C. M. (1956). *Social Work*, *1*(4), 121. Cromack, I. W. (1955). *Southwestern Social Science Quarterly*, *36*, 313-314. Laabs, A. (1955). *Social Service Review*, *29*, 417-419. Mangold, G. B. (1955). *Sociology and Social Research*, *39*, 344. Meyerand, G. E. (1956). *Social Casework*, *37*, 89.

Radin, N. (1977). *Assessment of effectiveness in preprimary and school social work programs*. Paper presented at the Institute for School Social Workers in Ann Arbor, Michigan, April 29, 1977, sponsored by the Michigan Department of Education. (ERIC Document Reproduction Service No. ED 173 365)

Smith, H. R. (1934). *The difficult child and the teacher: A study of factors in the situations of children whom teachers found it difficult to handle constructively, and some suggestions for preventing difficulties in teacher-pupil situations*. New York: Author. BR: Meredith, L. A. (1935). *Visiting Teachers Bulletin*, *10*(2), 3.

Watkins, R., & Derrick, D. (Eds.). (1977). *Co-operative care: Practice and information profiles*. Manchester, England: Centre for Information and Advice on Educational Disadvantage. (ERIC Document Reproduction Service No. ED 174 707)

# A BIBLIOGRAPHY OF RESOURCES FOR RESEARCH

James G. McCullagh

ABSTRACT: This bibliography includes a listing of research methods textbooks for the social and behavioral sciences, social work, and education, as well as readings in the areas of statistics and statistical programs, grant and research proposals, clinical research designs, evaluation, methods, tests and measurements, ethics and research, and qualitative research.

This bibliography is intended to be a companion to the reference lists found at the end of chapters in this handbook. Collectively they represent a valuable resource for further study and access to other reference lists. The literature of the facets of the research process is extensive. This bibliography suggests additional sources to facilitate the review of material previously studied and to explore topics of interest. Readers should feel free to browse among the various collections in a university library using the references found in this handbook as a starting point.

## Research Textbooks

Textbooks for research methods courses for education, social work, and the social and behavioral sciences are listed below. All have been published in the 1980s. They provide a current overview of the research process, orient the reader to particular areas of interest, and include extensive references. Many such texts exist, and updated editions as well as new texts are published regularly.

### Education

Best, J. W., & Kahn, J. V. (1986). Research in education (5th ed.). Englewood Cliffs, NJ: Prentice-Hall. xiv, 380 pages.

Borg, W. R., & Gall, M. D. (1983). Education research: An introduction (4th ed.). New York: Longman. xxxvi, 936 pages.

Cates, W. M. (1985). A practical guide to educational research. Englewood Cliffs, NJ: Prentice-Hall. xvi, 252 pages.

Cohen, L., & Manion, L. (1985). Research methods in education (2nd ed.). London: Croom Helm. xxii, 383 pages.

Crowl, T. K. (1986). Fundamentals of research: A practical guide for educators and special educators. Columbus, OH: Publishing Horizons. xii, 241 pages.

Hopkins, C. D. (1980). Understanding educational research: An inquiry approach. Columbus, OH: Merrill. xvi, 527 pages.

Moore, G. W. (1983). Developing and evaluating educational research. Boston: Little, Brown. xvi, 432 pages.

Slavin, R. E. (1984). Research methods in education: A practical guide. Englewood Cliffs, NJ: Prentice-Hall. xiv, 306 pages.

### Social and Behavioral Sciences

Babbie, E. R. (1986). The practice of social research (4th ed.). Belmont, CA: Wadsworth. xxii, 577 pages.

Bailey, K. D. (1987). Methods of social research (3rd ed.). New York: Fress Press. xxvi, 533 pages.

Baker, T. L. (1988). Doing social research. New York: McGraw-Hill. xxvi, 483 pages.

Chadwick, B. A., Bahr, H. M., & Albrecht, S. L. (1984). Social science research methods. x, 454 pages.

Craig, J. R., & Metze, L. P. (1986). Methods of psychological research (2nd ed.). Monterey, CA: Brooks/Cole. xx, 322 pages.

Drew, C. J., & Hardman, M. L. (1985). Designing and conducting behavioral research. New York: Pergamon Press. vi, 305 pages.

Guy, R. F., Edgley, C. E., Arafat, I., & Allen, D. E. (1987). Social research methods: Puzzles and solutions. Boston: Allyn and Bacon. x, 470 pages.

Jones, R. A. (1985). Research methods in the social and behavioral sciences. Sunderland, MA: Sinauer Associates. xvi, 411 pages.

Jung, J. (1982). The experimenter's challenge: Methods and issues in psychological research. New York: Macmillan. xii, 429 pages.

Kidder, L. H., & Judd, C. M. (1986). Research methods in social relations (5th ed.). New York: Holt, Rinehart and Winston. xii, 563 pages.

Monette, D. R., Sullivan, T. J., & DeJong, C. R. (1986). Applied social research: Tool *for the human services*. New York: Holt, Rinehart and Winston. xx, 416 pages.

Rosenthal, R., & Rosnow, R. L. (1984). *Essentials of behavioral research: Methods and data analysis*. New York: McGraw-Hill. xx, 519 pages.

Rubin, H. J. (1983). *Applied social research*. Columbus, OH: Merrill. viii, 502 pages.

Shontz, F. C. (1986). *Fundamentals of research in the behavioral sciences: Principles and practice*. Washington, DC: American Psychiatric Press. xvi, 323 pages.

### Social Work

Arkava, M. L., & Lane, T. A. (1983). *Beginning social work research*. Boston: Allyn and Bacon. vi, 245 pages.

Atherton, C. R., & Klemmack, D. L. (1982). *Research methods in social work: An introduction*. Lexington, MA: D. C. Heath. xviii, 330 pages.

Bloom, M. (1986). *The experience of research*. New York: Macmillan. xii, 401 pages.

Grinnell, R. M., Jr. (Ed.). (1988). *Social work research and evaluation* (3rd ed.). Itasca, IL: Peacock. xx, 544 pages.

Reid, W. J., & Smith, A. D. (1981). *Research in social work*. New York: Columbia University Press. xii, 417 pages.

Schuerman, J. R. (1983). *Research and evaluation in the human services*. New York: Free Press. xiv, 224 pages.

Wechsler, H., Reinherz, H. Z., & Dobbin, D. D. (Eds.). (1981). *Social work research in the human services* (2nd ed.). New York: Human Sciences Press. 358 pages.

## Grant and Research Proposals

Behling, J. H. (1984). *Guidelines for preparing the research proposal* (Rev. ed.). Lanham, MD: University Press of America. vi, 82 pages.

Holm, D. H. (1984). *Iowa directory of foundations*. Dubuque, IA: Trumpet Associates. iv, 108 pages.

Krathwohl, D. R. (1988). *How to prepare a research proposal: Guidelines for funding and dissertations in the social and behavioral sciences* (3rd ed.). Syracuse, NY: Syracuse University Press. 302 pages.

Lauffer, A. (1977). *Grantsmanship*. Beverly Hills, CA: SAGE. 120 pages.

Lee, L. (1981). *The grants game*. San Francisco: Harbor. viii, 177 pages.

Lefferts, R. (1982). *Getting a grant in the 1980s: How to write successful grant proposals* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall. viii, 168 pages.

Quarles, S. D. (Ed.). (1986). *Guide to federal funding for social scientists*. New York: Russell Sage Foundation. xii, 382 pages.

Shellow, J. R. (Ed.). (1985). *Grant seekers guide* (rev.). Mt. Kisco, New York: Moyer Bell. x, 550 pages.

## Clinical Research/Single Subject Design

Barlow, D. H., & Hersen, M. (1984). *Single case experimental designs: Strategies for studying behavior change* (2nd ed.). New York: Pergamon Press. xii, 419 pages.

Bloom, M., & Fischer, J. (1982). *Evaluating practice: Guidelines for the accountable professional*. Englewood Cliffs, NJ: Prentice-Hall. xii, 512 pages.

Jayaratne, S., & Levy, R. L. (1979). *Empirical clinical practice*. New York: Columbia University Press. xviii, 340 pages.

Kazdin, A. E. (1982). *Single-case research designs: Methods for clinical and applied settings*. New York: Oxford University Press. xiv, 368 pages.

Rosenblatt, A., & Waldfogel, D. (Eds.). (1983). *Handbook of clinical social work*. San Francisco: Jossey-Bass. xxx, 1181 pages. See especially Section IV, New Applications of Research in Clinical Practice, pages 549-720.

Tawney, J. W., & Gast, D. L. (1984). *Single subject research in special education*. Columbus, OH: Merrill. xiv, 433 pages.

Tripodi, T., & Epstein, I. (1980). *Research techniques for clinical social workers*. New York: Columbia University Press. x, 255 pages.

## Evaluation

Many of the listed sources comprise the nine volume Program Evaluation Kit developed by the Center for the Study of Evaluation, University of California, Los Angeles and published by SAGE Publications. See also Appendix A for selected excerpts from the *NASW Standards for Social Work Services in Schools* regarding evaluation of services.

Brinkerhoff, R. O., Brethower, D. M., Hluchyj, T., & Nowakowski, J. R. (1983). *Program evaluation: A practitioner's guide for trainers and educators*. Boston: Kluwer-Nijhoff. xxviii, 385 pages.

Cronbach, L. J. (1982). Designing evaluations of educational and social programs. San Francisco: Jossey-Bass. xxvi, 374 pages.

Fitz-Gibbon, C. T., & Morris, L. L. (1987). How to analyze data (Vol. 8). Newbury Park, CA: SAGE. 162 pages.

Fitz-Gibbon, C. T., & Morris, L. L. (1987). How to design a program evaluation (Vol. 3). Newbury Park, CA: SAGE. 168 pages.

Henerson, M. E., Morris, L. L., & Fitz-Gibbon, C. T. (1987). How to measure attitudes (Vol. 6). Newbury Park, CA: SAGE. 185 pages.

Herman, J. L., Morris, L. L., & Fitz-Gibbon, C. T. (1987). Evaluator's handbook (Vol. 1). Newbury Park: SAGE. 159 pages.

Isaac, S., & Michael, W. B. (1981). Handbook in research and evaluation (2nd ed.). San Diego: EdITS. vi, 234 pages.

King, J. A., Morris, L. L., & Fitz-Gibbon, C. T. (1987). How to assess program implementation (Vol. 5). Newbury Park, CA: SAGE. 143 pages.

Morell, J. A. (1979). Program evaluation in social research. New York: Pergamon Press. xvi, 193 pages.

Morris, L. L., Fitz-Gibbon, C. T., & Freeman, M. E. (1987). How to communicate evaluation findings (Vol. 9). Newbury Park, CA: SAGE. 92 pages.

Morris, L. L., Fitz-Gibbon, C. T., & Lindheim, E. (1987). How to measure performance and use tests (Vol. 7). Newbury Park, CA: SAGE. 164 pages.

Patton, M. Q. (1987). How to use qualitative methods in evaluation (Vol. 4). Newbury Park, CA: SAGE. 176 pages.

Rossi, P. H., & Freeman, H. E. (1982). Evaluation: A systematic approach (2nd ed.). Beverly Hills, CA: SAGE. 351 pages.

Rutman, L. (1980). Planning useful evaluations: Evaluability assessment. Beverly Hills, CA: SAGE. 208 pages.

Stecher, B. M., & Davis, W. A. (1987). How to focus an evaluation (Vol. 2). Newbury Park, CA: SAGE. 94 pages.

Theobald, W. F. (1985). The evaluation of human service programs. Champaign, IL: Management Learning Laboratories. xii, 170 pages.

Worthen, B. R., & Sanders, J. R. (1987). Educational evaluation: Alternative approaches and practical guidelines. New York: Longman. xiv, 450 pages.

## Statistics

Most research textbooks include one or more chapters on "Data Analysis and Statistics". They are useful for review, especially if one is conducting survey research or performing less complex statistical analyses. Included also are a few basic statistics textbooks and two that were written for social workers. For determining statistical and practical significance of client change using single-system design research, readers may refer to the section below, "Data Analysis: Single System Designs".

Researchers who need to analyze data and perform statistical operations will use a statistical package such as SPSSX on a computer. SPSSX is a highly sophisticated program. "The SPSSX Information Analysis System is a comprehensive tool for managing, analyzing, and displaying information. It can take data from almost any type of file (or combine several files) and turn them into meaningful information: tabulated reports, plots of distribution and trends, and results from a wide variety of statistical procedures. SPSSX brings together data management, report writing, and statistical analysis in one comprehensive system with a single language" (SPSSX users guide, 1986, p. 1).

Other software packages include (1) SAS (Statistical Analysis System), (2) BMDP (biomedical computer programs), and (3) MINITAB. References listed below--from the most basic to advanced--are for SPSSX. It is possible to self-instruct but one or more university courses are recommended. Again, such statistical programs are best used for large data sets and extensive or complex statistical analysis.

### Textbooks

Besag, F. P., & Besag, P. L. (1985). Statistics for the helping professions. Beverly Hills, CA: SAGE. 375 pages.

Christensen, L. B., & Stoup, C. M. (1986) Introduction to statistics for the social and behavioral sciences. Belmont, CA: Brooks/Cole. x, 566 pages.

Craft, J. L. (1985). Statistics and data analysis for social workers. Itasca, IL: Peacock. vi, 160 pages.

Downie, N. M., & Heath, R. W. (1983). Basic statistical methods (5th ed.). New York: Harper & Row. viii, 371 pages.

Hinkle, D. E., Wiersma, W., & Jurs, S. G. (1988). *Applied statistics for the behavioral sciences* (2nd ed.). Boston: Houghton Mifflin. xx, 682 pages.

Horwitz, L., & Ferleger, L. (1980). *Statistics for social change*. Boston: South End Press. xiv, 341 pages.

Lutz, G. M. (1983). *Understanding social statistics*. New York: Macmillan. xiv, 530 pages.

Weinbach, R. W., & Grinnell, R. M., Jr. (1987). *Statistics for social workers*. New York: Longman. xii, 212 pages.

### Statistical Packages: SPSS

Baker, T. L. (1988). *Doing social research*. New York: McGraw-Hill. Appendix C, pages 443-453, is a basic introduction to SPSSX.

Hedderson, J. (1987). *SPSSX made simple*. Belmont, CA: Wadsworth. xvi, 253 pages.

Jacques, J. M. (1986). A learner's guide to SPSSX. In E. Babbie, *The practice of social research* (4th ed.) (pp. 497-552). Belmont, CA: Wadsworth.

Norusis, M. J. (1986). *The SPSS guide to data analysis*. Chicago: SPSS. xiv, 402 pages.

Norusis, M. J. (1985). *SPSSX advanced statistics guide*. New York: McGraw-Gill. vi, 505 pages.

Norusis, M. J. (1983). *SPSSX: Introductory statistics guide*. Chicago: SPSS. xii, 276 pages.

SPSS. (1984). *SPSSX basics*. New York: McGraw-Hill. x, 214 pages.

SPSS. (1986). *SPSSX user's guide* (2nd ed.). New York: McGraw-Hill. xiv, 988 pages.

### Data Analysis: Single System Designs

Behling, J. H., & Merves, E. S. (1984). *The practice of clinical research: The single case method*. Lanham, MD: University Press of America. See especially Chs. 6-7, "Methods of Data Analysis" and "Statistical Techniques for Data Analysis".

Bloom, M., & Fischer, J. (1982). *Evaluating practice: Guidelines for the accountable professional*. Englewood Cliffs, NJ: Prentice-Hall. See Chs. 19-22, "Basic Principles of Analysis", "Visual Analysis of Single System Design Data", "Statistical Approaches to the Analysis of Single System Design Data", and "Selecting a Procedure for Analyzing Data".

Gingerich, W. J. (1983). Significance testing in single-case research. In A. Rosenblatt & D. Waldfogel (Eds.), *Handbook of clinical social work* (pp. 694-720). San Francisco: Jossey-Bass.

Kazdin, A. E. (1984). Statistical analyses for single-case experimental designs. In D. H.Barlow & M. Hersen, Single case experimental designs: Strategies for studying behavior change (2nd ed.) (pp. 285-324). New York: Pergamon Press.

## Methods

Babbie, E. R. (1973). Survey research methods. Belmont, CA: Wadsworth. xiv, 384 pages.

Berdie, D. R., Anderson, J. F., & Niebuhr, M. A. (1986). Questionnaires: Design and Use (2nd ed.). Metuchen, NJ: Scarecrow Press. xiv, 330 pages.

Brenner, M., Brown, J., & Canter, D. (Ed.). (1985). The research interview: Uses and approaches. Orlando, FL: Academic Press. xiv, 276 pages.

Bromley, D. B. (1986). The case-study method in psychology and related disciplines. Chichester, England: Wiley. xiv, 351 pages.

Cooper, H. M. (1984). The integrative research review: A systematic approach. Beverly Hills, CA: SAGE. 144 pages.

Frey, J. H. (1983). Survey research by telephone. Beverly Hills, CA: SAGE. 208 pages.

McKillip, J. (1987). Need analysis: Tools for the human services and education. Newbury Park, CA: SAGE. 143 pages.

Stewart, D. W. (1984). Secondary research: Information sources and methods. Beverly Hills, CA: SAGE. 135 pages.

Yin, R. K. (1984). Case study research: Design and methods. Beverly Hills, CA: SAGE. 160 pages.

## Ethics and Research

### Assessment and Ethics

Helton, G. B., Workman, E. A., & Matuszek, P. A. (1982). Psychoeducational assessment: Integrating concepts and techniques. New York: Grune & Stratton. See Part I, "Legal and Ethical Considerations", pages 43-117.

Rekers, G. A. (1984). Ethical issues in child behavioral assessment. In T. H. Ollendick & M. Hersen (Eds.), Child behavioral assessment: Principles and procedures (pp. 244-262). New York: Pergamon Press.

### Social Work Practice

Loewenberg, F., & Dolgoff, R. (1988). Ethical decisions for social work practice (3rd ed.). Itasca, IL: Peacock. xvi, 174 pages.

Reamer, F. G. (1982). Ethical dilemmas in social service. New York: Columbia University Press. xviii, 280 pages.

Reamer, F. G. (1987). Values and ethics. In NASW (Ed.), *Encyclopedia of Social Work* (Vol. 2) (pp. 801-809). Silver Spring, MD: NASW.

Rhodes, M. L. (1986). *Ethical dilemmas in social work practice*. Boston: Routledge & Kegan Paul. xiv, 200 pages.

Rosenblatt, A., & Waldfogel, D. (Eds.). (1983). *Handbook of clinical social work*. San Francisco: Jossey-Bass. See Section VI, "Values, Ethics, and Legal Issues", pages 845-972.

Yelaja, S. A. (Ed.). (1982). *Ethical issues in social work*. Springfield, IL: Charles C. Thomas. xiv, 451 pages.

### Social Work Research

Gilchrist, L. D., & Schinke, S. P. (1988). Research ethics. In R. M. Grinnell, Jr. (Ed.), *Social work research and evaluation* (3rd ed.) (pp. 65-79). Itasca, IL: Peacock.

Gillespie, D. F. (1987). Ethical issues in research. In NASW (Ed.), *Encyclopedia of social work* (Vol. 1) (pp. 503-512). Silver Spring, MD: NASW.

Jankovic, J. (1982). Human subjects and the ethics of school social work research. In R. T. Constable & J. P. Flynn (Eds.), *School social work: Practice and research perspectives* (pp. 369-374). Homewood, IL: Dorsey.

Steiner, J. R., & Pastorello, T. (1982). Differential ethical orientations to practice and research in school social work. In R. T. Constable & J. P. Flynn (Eds.), *School social work: Practice and research perspectives* (pp. 309-321). Homewood, IL: Dorsey.

Yelaja, S. A. (1982). Human subjects for research and experimentation. In S. A. Yelaja (Ed.), *Ethical issues in social work* (pp. 312-337). Springfield, IL: Charles C. Thomas.

### Counseling

Corey, G., Corey, M. S., & Callanan, P. (1988). *Issues and ethics in the helping professions* (3rd ed.). Pacific Grove, CA: Brooks/Cole. xx, 441 pages.

Van Hoose, W. H., & Kottler, J. A. (1985). *Ethical and legal issue in counseling and psycotherapy* (2nd ed.). San Francisco: Jossey-Bass. xxiv, 258 pages. Annotated bibliography, 221-231.

### Social and Behavioral Sciences

American Psychological Association. (1982). *Ethical principles in the conduct of research with human participants*. Washington, DC: Author. 76 pages.

Beauchamp, T. L., Faden, R. R., Wallace, R. J., Jr., & Walters, L. (Eds.). (1982). Ethical issues in social science research. Baltimore, MD: The John Hopkins University Press. xii, 436 pages.

Bower, R. T., & de Gasparis, P. (1978). Ethics in social research: Protecting the interests of human subjects. New York: Praeger. x, 227 pages. Includes extensive annotated bibliography on literature primarily published between 1965 and 1976, pp. 85-220.

Cassell, J., & Jacobs, S. (Eds.). (1987). Handbook of ethical issues in anthropology. Washington, DC: American Anthropological Association. iv, 104 pages.

Reece, R. D., & Siegal, H. A. (1986) Studying people: A primer in the ethics of social research. Macon, GA: Mercer University Press. x, 221 pages.

Reynolds, P. D. (1979). Ethical dilemmas and social science research. San Francisco: Jossey-Bass. xxii, 505 pages.

Reynolds, P. D. (1982). Ethics and social science research. Englewood Cliffs, NJ: Prentice-Hall. xiv, 191 pages.

Schuler, H. (1982). Ethical problems in psychological research (Trans. by M. S. Woodruff & R. A. Wicklund). New York: Academic Press. xviii, 269 pages.

**Chapters in Texbooks** (For full citation see "Textbooks")

Babbie. The practice of social research. Ch. 19, "The Ethics and Politics of Social Research".

Bailey. Methods of social research. Ch. 17, "Ethics in Social Research".

Baker. Doing social research. Ch. 3, "The uses and abuses of social research".

Drew & Hardman. Designing and conducting behavioral research. Ch. 3, "Ethical issues in conducting research".

Jung. The experimenter's challenge. Ch. 15, "What are the experimenter's ethical dilemmas?". Ch. 16, "What alternatives do we have?".

Kidder & Judd. Research Methods in Social Relations. Ch. 18, "Ethical implications". (Written by S. Cook)

Monette, et al. Applied social research. Ch. 3, "Ethical issues in social research".

Rosenthal & Rosnow. Essentials of behavioral research. Ch. 14, "Ethics and values in human research".

Rubin. Applied social research. Ch. 2, "Organizational research and ethical dilemmas".

Tawney & Gast. *Single subject research in special education*. Ch. 14, "Ethical Principles and Practices".

*Ethical Codes* (For full citation see appropriate section)

American Anthropological Association. (1983). *Professional ethics: Statements and procedures of the American Anthropological Association*. Washington, DC: Author.

Bailey. *Methods of social research*. Appendix C, "Code of Professional Ethics and Practices of the American Association for Public Opinion Research".

Bower & de Gasparis. *Ethics in social research*. Appendix A, "Ethical codes of Professional Associations".

Loewenberg & Dolgoff. *Ethical decisions for social work practice*. Appendix B includes codes of NASW, National Association of Black Social Workers, and National Federation of Societies for Clinical Social Work.

National Association of Social Workers. (1980). *Code of ethics*. Washington, DC: Author. See Appendix B for selected excerpts.

National Federation of Societies for Clinical Social Work. (1987). Code of ethics. *Clinical Social Work Journal*, *15*, 81-91. See Appendix C for selected excerpts.

Reynolds. *Ethics and social science research*. Appendices include codes of the American Anthropological Association, American Political Science Association, American Psychological Association, and the American Sociological Association.

Rubin. *Applied social research*. Page 44, "Summary of the Ethical Code of the Evaluation Research Society (1981)".

Schuler. *Ethical problems in psychological research*. Appendix includes numerous codes for psychologists.

Van Hoose & Kottler. *Ethical and legal issues in counseling and psycotherapy*. Codes are included in the appendices for the American Psychological Association, American Association for Counseling and Development, American Association for Marriage and Family Therapy, and NASW.

Yelaja. *Ethical issues in social work*. Appendix B includes codes for the Alberta Association of Social Workers, British Association of Social Workers, Canadian Association of Social Workers, and NASW.

## Tests and Measurements

### Introduction to Measurement and Testing

Arkava, M. L., & Snow, M. (1978). *Psychological tests and social work practice: An introductory guide*. Springfield, IL: Charles C. Thomas. x, 100 pages.

Corcoran, K. J. (1988). Selecting a measuring instrument. In R. M. Grinnell, Jr. (Ed.), Social work research and evaluation (3rd ed.) (pp. 137-155). Itasca, IL: Peacock.

Corcoran, K., & Fischer, J. (1987). Measures for clinical practice: A sourcebook. New York: Free Press. See Part I, "Measurement and Practice", which includes chapters on "Basic Principles of Measurement", "Advantages and Disadvantages of Rapid Assessment Instruments", "Selecting Measures for Practice", and "Administering the Instruments".

Gabel, S., Oster, G. D., & Butnick, S. M. (1986). Understanding psychological testing in children: A guide for health professionals. New York: Plenum. x, 184 pages.

Hudson, W. W., & Thyer, B. A. (1987). Research measures and indices in direct practice. In NASW (Ed.), Encyclopedia of social work (Vol. 2) (pp. 487-498). Silver Spring, MD: NASW.

Love, H. D. (1985). Psychological evaluation of exceptional children. Springfield, IL: Charles C. Thomas. viii, 123 pages.

Wodrich, D. L. (1984). Children's psychological testing: A guide for nonpsychologists. Baltimore, MD: Paul H. Brookes. x, 196 pages.

## Basic Reference Sources on Tests

The Buros Institute of Mental Measurements, named in honor of Oscar Buros, and now housed at The University of Nebraska-Lincoln, has continued the work of Buros, who was a leader in editing and publishing numerous books on testing. Listed below are works edited by Buros and his successor James V. Mitchell, Jr., who is now the Director of the Institute. These works, considered standard basic reference sources for information on tests, are classified into three categories:

Mental Measurements Yearbooks (MMY). Nine have been published since 1938; only the two most recent are cited below. In July, 1988, The Supplement to the Ninth Mental Measurements Yearbook will be published.

Buros, O. K. (Ed.). (1978). The eighth mental measurements yearbook (2 vols.). Highland Park, NJ: Gryphon Press. xliv, 1155 pages.

Mitchell, J. V., Jr. (Ed.). (1985). The ninth mental measurements yearbook (2 vols.). Lincoln: University of Nebraska Press. xxx, 2002 pages.

Tests in Print (TIP). Three have been published and are cited below.

Buros, O.K. (Ed.). (1961). Tests in print. Highland Park, NJ: Gryphon Press. xxx, 479 pages.

Buros, O. K. (Ed.). (1974). Tests in print II. Highland Park, NJ: Gryphon Press. xl, 1107 pages.

Mitchell, J. V., Jr. (Ed.). (1983). Tests in print III. Lincoln: University of Nebraska Press. xxxii, 714 pages.

Separate Monographs. Only two of about 14 monographs are listed below.

Buros, O. K. (Ed.). (1970). Personality tests and reviews. Highland Park, NJ: Gryphon Press. xxxii, 1659 pages.

Buros, O. K. (Ed.). (1975). Personality tests and reviews II. Highland Park, NJ: Gryphon Press. xxxi, 841 pages.

How to Use the Buros' Collection on Tests. The reader may refer to the latest editions of the MMY and TIP, which provide specific instructions on their use. One might assume, for example, that one is interested in using an instrument to assess adaptive behavior of preschool children. If one knows the name of a specific instrument, such as the Developmental Profile II (DP II), the reader could turn to the ninth MMY and find on pages 466-469 a brief description of the DP II, including the publisher and two reviews of the instrument. A publishers' directory is found in volume II of the MMY9. The reader is also referred to TIP III (T3:698), which includes a list of references. If one were uncertain on which instrument to use or wanted to compare different adaptive assessment instruments, one could turn to the Classified Subject Index in volume 2 of the MMY9 and find the subject category "Developmental". TIP III also serves as a master index to previously published tests in the eight MMYs.

An online computer database is also available through Bibliographic Retrieval Service (BRS) with the search label of MMYD. If one is uncertain of a specific instrument to use or wants current information on a scale, an online search can be productive. The reader might also consider using the Educational Testing Service Test Collection database through BRS. (See Schrader in this handbook for a discussion of databases.)

### Assessment

Goldman, J., Stein, C. L., & Guerry, S. (1983). Psychological methods of child assessment. New York: Brunner/Mazel. xvi, 396 pages.

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# Appendix A

# NASW Standards For Social Work Services in Schools*

**STANDARD 17: All School Social Work Programs, New or Long Standing Shall be Evaluated on an Ongoing Basis to Determine their Relevance, Effectiveness, Efficiency, and Contribution to the Process of Public School Education.**

Through ongoing program evaluation the social work staff demonstrates its accountability to the school population served, the system of public school education, the public, and the standards and ethics of the social work profession.

The method used in program evaluation shall be reassessed periodically. Whenever indicated, consultation shall be sought to improve the setting of objectives related to pupil problems, the identification of appropriate tasks to be performed to meet those objectives, and the measuring of outcomes of the service.

Staff reporting forms and other forms of record keeping shall be reviewed periodically to be sure they are consonant with the job to be done. The social worker must establish a clear and rational basis for choice of approach, and must know to what extent that approach has been tested by research. Models of school social work practice should be developmental, not static.

**STANDARD 21: School Social Workers Shall Keep Records, Including Reports of Accurate and Meaningful Statistics, as Needed for the Management, Evaluation, and Planning of the School Social Work Program.**

The utilization of records and statistics is one way for social workers to demonstrate their accountability to school administration and the community. Therefore it is necessary for social workers to quantify and analyze their activities. Moreover, a study of program statistics and activity reports can lead to revisions in school social work practice to ensure the best possible use of time.

**STANDARD 22: School Social Workers Shall be Responsible for Identifying Individual Pupils and Target Pupil Populations in Need of Social Work Services. This Identification Shall Come About Through a Process of Needs Assessment That Includes Planned Consultation With School System Personnel, Community Representatives, and Pupils and Their Parents.**

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Assessment includes a study of psycho-social factors that interfere with children's adjustment to school, and a study of the interaction of pupil characteristics with school and community conditions. More specifically, this means assessing:

1. personal characteristics, developmental health and family history, attitudes and behavior of the child who has been referred;
2. interpersonal problems within the family or peer group;
3. reports on the child's problem by teachers or other pupil specialists;
4. institutional factors that may affect children's behaviors;
5. the type of organizational structure and relationship between school board, school administration and community;
6. group patterns of pupil achievement and adjustment at critical points of stress in the pupil life cycle;
7. existing community resources for children and young persons;
8. formal and informal school policies;
9. problems and stresses in the educational process as perceived

## Appendix B

## Code of Ethics of the National Association of Social Workers*

### I. The Social Worker's Conduct and Comportment as a Social Worker

E. Scholarship and Research--The social worker engaged in study and research should be guided by the conventions of scholarly inquiry.

1. The social worker engaged in research should consider carefully its possible consequences for human beings.

2. The social worker engaged in research should ascertain that the consent of participants in the research is voluntary and informed, without any implied deprivation or penalty for refusal to participate, and with due regard for participants' privacy and dignity.

3. The social worker engaged in research should protect participants from unwarranted physical or mental discomfort, distress, harm, danger, or deprivation.

4. The social worker who engages in the evaluation of services or cases should discuss them only for the professional purposes and only with persons directly and professionally concerned with them.

5. Information obtained about participants in research should be treated as confidential.

6. The social worker should take credit only for work actually done in connection with scholarly and research endeavors and credit contributions made by others.

### II. The Social Worker's Ethical Responsibility to Clients

F. Primacy of Clients' Interests--The social worker's primary responsibility is to clients.

1. The social worker should serve clients with devotion, loyalty, determination, and the maximum application of professional skill and competence.

### IV. The Social Worker's Ethical Responsibility to Employers and Employing Organizations

L. Commitments to Employing Organization--The social worker should adhere to commitments made to the employing organization.

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1. The social worker should work to improve the employing agency's policies and procedures, and the efficiency and effectiveness of its services.

**V. The Social Worker's Ethical Responsibility to the Social Work Profession.**

O. Development of Knowledge--The social worker should take responsibility for identifying, developing, and fully utilizing knowledge for professional practice.

1. The social worker should base practice upon recognized knowledge relevant to social work.

2. The social worker should critically examine, and keep current with emerging knowledge relevant to social work.

3. The social worker should contribute to the knowledge base of social work and share research knowledge and practice wisdom with colleagues.

# Appendix C

# Code of Ethics*

## VII. PURSUIT OF RESEARCH AND SCHOLARLY ACTIVITIES

In planning, conducting, and reporting a study, the investigator has the responsibility to make a careful evaluation of its ethical acceptability, taking into account the following additional principles for research with human subjects. To the extent that this appraisal, weighing scientific and humane values, suggests a compromise of any principle, the investigator incurs an increasingly serious obligation to seek advice and to observe stringent safeguards to protect the rights of the research participants.

(a) In conducting research in institutions or organizations, clinical social workers obtain appropriate authority to carry out such research. Host organizations are given proper credit for their contributions.

(b) Ethically acceptable research begins with the establishment of a clear and fair agreement between the investigator and the research participant that clarifies the responsibilities of each. The investigator has the obligation to honor all promises and commitments included in that agreement.

(c) Responsibility for the establishment and maintenance of acceptable ethical practice in research always remains with the investigator. The investigator is also responsible for the ethical treatment of research participants by collaborators, assistants, students, and employees, all of whom, however, incur parallel obligations.

(d) Ethical practice requires the investigator to inform the participant of all features of the research that might reasonably be expected to influence willingness to participate, and to explain all other aspects of the research about which the participant inquires. Failure to make full disclosure imposes additional force to the investigator's abiding responsibility to protect the welfare and dignity of the research participant. After the data are collected, the investigator provides the participant with information about the nature of the study in order to remove any misconceptions that may have arisen.

(e) The ethical investigator protects participants from physical and mental discomfort, harm, and danger. If a risk of such consequences exists, the investigator is required to inform the participant of that fact, secure consent before proceeding, and take all possible measures to minimize distress. A research procedure must not be used if it is likely to cause serious or lasting harm to a participant.

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(f) The methodological requirements of the study may necessitate concealment, deception, or minimal risk. In such cases the investigator is required to justify the use of these techniques and to ensure, as soon as possible, the participant's understanding of the reasons and sufficient justification for the procedure in question.

(g) Ethical practice requires the investigator to respect the individual's freedom to decline to participate in or withdraw from research, and to so inform prospective participants. The obligation to protect this freedom requires special vigilance when the investigator is in a position of power over the participant, as, for example, when the participant is a student, client, employee, or otherwise is in a dual relationship with the investigator. It is unethical to penalize a participant in any way for withdrawing from or refusing to participate in a research project.

(h) Information obtained about the individual research participants during the course of an investigation is confidential unless otherwise agreed in advance. When the possibility that others may obtain access to such information exists, to protect confidentiality, the participants will be informed that it is part of the procedure to obtain informed consent.

(i) Investigations of human participants using drugs are conducted only in conjunction with licensed physicians.

(j) Research findings must be presented accurately and completely, with full discussion of both their usefulness and their limitations. Clinical social workers are responsible for attempting to prevent any distortion or misuse of their findings.

(k) Clinical social workers take credit only for work actually done in scholarly and research endeavors and give appropriate credit to the contributions of others.

# INFORMATION TECHNOLOGY IN SCHOOL SOCIAL WORK: NEW CHALLENGES FOR PROFESSIONAL PRACTICE

Marilyn L. Flynn

ABSTRACT: This chapter examines trends in the development of computer and communications technology from the perspective of core school social work functions. Implications for school-community networks, individual educational planning, and clinical interventions are explored, particularly in light of new potential for research and improved information management. Limiting factors which inhibit use of computer systems in the schools are identified, as are consequences of failure to innovate.

This chapter will summarize trends in the development of information technology and examine implications for systems with which social workers in the schools typically interact. Emphasis is placed on broad functions of automated equipment such as communications, information management, and socio-educational interventions. The chapter will also discuss how social workers can intensify the impact of their change efforts in community institutions while improving--even inventing new forms of--information management.

## Trends in Computers and Information Technology

The primary rationale for use of computers is the same as for all other previous technological innovations in history: to enlarge the capacity of human beings for control, communication, and personal expression. For example, the telephone has amplified the range of human speech and hearing, while television has greatly extended the reach of human vision. In this same sense, computers will expand human memory and individual capacity for organization or reorganization of information. Some authors even visualize a future partnership of computers and humans in which machines will calculate and remember, while humans focus on analytic, interpretive, and intuitive understandings which cannot be easily emulated by machines (Birnbaum, 1985).

Within the next few years, school social workers will be faced with a fresh technical landscape in the schools. Especially in larger, prosperous districts, many professionals can expect to have direct access to their own personal automated system in the workplace. The standard computer configuration will consist of a powerful desktop computer with a large memory, rapid computing power, and a few features to promote usability (e.g., touch sensitive screens). The system will be networked to other computers within the organization and potentially elsewhere in the community. This "loose" rather than tightly centralized computing structure will offer a nearly ideal combination of computer and communications technology to address individual, organizational, or inter- organizational problems.

The term "information technology" today usually refers to this integration of computer and communications devices. By itself, the computer is merely a device for increasing the speed and accuracy with which manipulations of text and data can be performed. A computer linked to a network of other computers, either within or beyond the confines of the school, provides a novel and powerful pathway for the exchange of knowledge. New forms of communication and conceivably higher levels of social integration are among the most exciting positive results if the technology is successfully employed in the context of well-defined aims and with positive leadership from the profession. This integration of computer and communications technology may in fact be the single most salient long-term development in its implications for school social work.

The networking of computers is rapidly replacing "stand-alone" operations. The experience of private industry after nearly two decades of experimentation is that sharing of information is vital to organizational productivity. The use of computer-mediated communications, such as electronic mail and computer conferences, does not require familiarity with complicated software languages, and represents a means of maintaining interpersonal contacts--a window through which otherwise technologically inexperienced or aversive professionals quickly enter the world of computer-supported activities. School social workers should, as a result of their professional training and experience, be able to exploit the communications potential of computer networks better than many other professions.

## Applications of Information Technology for Macro-Level Change and Research in the Schools

### Computer-Mediated Networking and Communications

One of the central, time-honored social work roles is organization of community networks for the exchange of resources and information. In school social work, these networks are particularly important for the empowerment of clients, case management, and program coordination. Networks are painstakingly built and frequently vulnerable to worker turnover. Research on network characteristics in the schools is minimal. However, conventional wisdom holds that successful networking correlates with experience, geographic centrality, and knowledge of community organization techniques. It is time-consuming and jeopardized by fiscal retrenchment, which reduces resources for inter-agency coordination.

Electronic communications or "computer-mediated communications systems" presents a fascinating opportunity for unprecedented expansion of professional interconnections. Because computers record and store transactions automatically, social workers can closely monitor the content and direction of network transactions. Moreover, the communications system is consummately democratic. Provided a computer has been equipped with the appropriate peripheral equipment, anyone can set up a "computer conference" or send "private" mail which is read only by the person on the network to whom it is addressed. Entire "files" can be exchanged--case records, for example, or text of any kind. Mail can be read, deleted, stored, printed out, analyzed with bibliographic software, and studied in terms of frequency, timing, psychological orientation, or network properties.

Computer-mediated communications produce different patterns in interaction and behavior than do face-to-face groups (Kerr & Hiltz, 1982; Markus, 1984). Research has shown that people who are separated by physical distance sharply increase the total amount and frequency of communication when linked by computer (Panko & Panko, 1981). Thus, computer networks appear to stimulate interchange and attitudes of cooperation among people or groups which otherwise might have minimal contact. A second effect of relevance to social workers occurs within organizations--an increase in both the total amount of communication and the average number of persons with whom network users stay in touch (Hiltz &

Turoff, 1981). Higher levels of involvement and self-expression by members of any organization may open channels for change and mutual support which otherwise might be absent.

Another interesting outcome of computer-mediated communication is that the relative power of individuals sometimes shifts (Hiltz & Turoff, 1978; Kerr & Hiltz, 1982). In computer networks users have physical anonymity. The gestures and movements by which people try to assert dominance in face-to-face groups (e.g., interrupting, shouting down, adopting facial expressions of displeasure or boredom) are absent. Current technology affords no aural cues. As a result, influence among individuals in computer-mediated groups is more equalized. One study has also suggested that males are more likely to adopt expressive and feeling-oriented modes of interaction in computer-based exchanges than in face-to-face groups (Flynn & Zimmerman, 1986). Research findings have also indicated that top-down communications give way to more team-based exchanges, in which short-lived groups form and support each other around specific themes or issues. Consequently, people who have never previously collaborated with each other can be seen working in small groups through the network around tasks in which they have discovered a common interest (Turoff & Hiltz, 1978).

For school social workers, computer networking can link people who have never met in person, produce more positive and productive interactions in the school/community environment, and foster novel group structures. With reduced lag time in communications, efficiency in social action projects can be stepped up. Social participation throughout all levels of the organization can be expanded beyond traditional hierarchical patterns.

Should the profession fail to exploit this technology and leave to others the initiative for its implementation and extension, school social workers may find some of their influence in the school and community network eroded. Unfortunately, as computer-mediated communication becomes more widespread in the society, new "electronic elites" are forming (Perrolle, 1987). Those who are members of computer conferences and regularly use electronic mail have the ability to communicate better and more quickly over a wider area than do those who rely only on mail, telephone, and person-to-person meetings. This is an advantage which social workers must not relinquish.

## Computer-Managed Educational Information Systems

One of the most widely accepted functions of computers is the storage, sorting, and retrieval of data. Large quantities of data can be processed with accuracy and rapidity, then organized or reorganized in complex ways. Advances in word processing and graphics software also mean that data can be visually presented in forms which are more readily intelligible. In effect, computers present the helping professions with a new vehicle for information control and dissemination. This gives fresh scope to school social workers who are striving both to anticipate and alter events in school and community life. There is no question that computers are already affecting social change by modifying the way individuals and groups understand and interact with their environment.

Computerized information systems in the schools have been introduced so far for two major purposes: (1) collection and feedback of data to support administrative functions of the institution; and (2) as "shells" which permit staff to generate more standardized educational plans for students. While some school districts routinely provide feedback to special education departments based on monthly reports by staff, there is no research which indicates whether there are any consequences for productivity or role performance. Research in the mental health field suggests that feedback from a computerized management information system to social workers can have significant positive effects on total number of cases carried, the number of actual contacts per case, and the number of staff hours in direct client contact (Kowalsky & Cohen, 1985). Similar productivity effects have been obtained in the military and the private sector, although the less sophisticated systems appear to generate the most direct benefit to professionals (Danziger & Kraemer, 1986).

Pressures for expansion of services to meet the needs of individuals and groups in the school has been unrelenting in the 1980s, while the relative adequacy of resources for specialized programs has declined in most communities. Social workers have responded by struggling to increase productivity, often at the cost of lowered morale and chronic over-extension. Increased utilization of automated technology to manage information requirements is one remedy for the problem, especially when combined with the word processing and communications capabilities of computers.

One of the philosophical difficulties of information systems is that they are most often perceived as instruments for administrators and are not generally considered to be meaningful or useful to professional staff. School social workers argue that quantitative measures only partially or inaccurately reflect the quality and importance of interventions. Practitioners would support the argument that social work is still more art than science.

Lanyon and Johnson (1980) characterize this point of view as "pre-technological" and identify a set of characteristics associated with pre-technological work settings, such as school social work. In these settings, professionals carry out almost all of the work themselves, avoiding standardization where possible, favoring experience rather than a scientific knowledge base, training new members by the apprenticeship system, and applying few or no sophisticated tools to achieve outcomes. In the case of social work, this takes the form of emphasis on relationship-building rather than a concern for performance outcomes, cause-effect relations, development of data for prediction or estimation, and other formal considerations (Buckingham, 1961; Lanyon & Johnson, 1980; Murray, 1976).

This is not to say that school social workers are oblivious to accountability issues and the importance of knowledge-based practice. But there are many forces in the traditional school social work setting which favor a "pre-technological" stance and make computerized information systems seem alien. Recent research has suggested that social workers and other practitioners appear to resist information technology, but actually most are inhibited simply by their lack of experience and inability to conceptualize how automated information systems could genuinely facilitate the accomplishment of normal work routines (Levitan & Willis, 1985).

There is perhaps another explanation for the glacial slowness with which school social workers and others have adapted automated information systems for professional uses. Computer programs which flexibly sort and combine data have been designed by companies which, in general, are preoccupied with keeping software costs down relative to program capabilities (Perrolle, 1987). Making machines work rapidly to produce outputs has taken highest priority among engineers and programmers. The usual ways in which people make abstractions or the wide range of individual differences in how people think about problems have not been well accommodated. Considering the unexploited design capabilities of hardware and software engineering, there is little genuinely "user-friendly" software despite much publicity to the contrary (Webster & Robins, 1986). Training is still necessary to become adept; extensive documentation in reference manuals remains essential. Time requirements for mastery are high. Eventually, these impediments will disappear as superior computer designs cover up details and complexity from users, and machines become more "natural" in the ways they interact with humans.

For the time being, the empirical issue is how school social workers can take advantage of existing software for information management even in the face of limited experience, learning time for mastery, poor computer architecture, and primitive software design. Some reasonable steps may in fact be taken. "Integrated" software--which combines several programs each performing specialized tasks like data management, word processing, and other related functions--somewhat simplifies the amount of specialized knowledge necessary to operate the system. Equally encouraging are the changes in microcomputer hardware and software which render the equipment responsive to a touch on the screen or the human voice and can accept instructions in natural language. These developments reduce user reliance on a keyboard or the necessity for remembering formal artificial commands and procedures.

One application of automated information systems which may have universal appeal to school social workers is preparation of Individual Education Plans (IEPs). While each IEP is intended to reflect the unique needs and potential of the child, collectively this instrument can be crucial to the overall effectiveness of service delivery. Unfortunately, conventional wisdom indicates that IEPs are widely regarded by school social workers as a dreary administrative requirement which fails to serve a valuable purpose. Although theoretically the IEP should serve as the foundation for decisions, assessments for progress, reports, and final evaluation, the current manual systems for setting up and maintaining these records are usually time-consuming, too lengthy for quick analysis or comparison, and unsuitable as a shared reference document in conferences with parents, staff, or others (Romanczyk, 1985).

What assistance might the computer provide? Assuming that social workers begin with service definitions and behavior outcomes which can be codified, the computer can "draft" the first version of the IEP on the basis of code numbers entered by the social worker. Goal priorities, progress milestones, and time projected to reach goals can be added using the same format. A standard computer-generated narrative from these numerical entries can be produced, with individualized text entered at any point the worker chooses. Experience has shown that this method may combine the best of both worlds: standardization and unique interpretation (Hedlund, Vieweg, & Cho, 1985).

In addition to this simple, straightforward mechanism for drafting the IEP narrative, computers can also present information on individual students in the form of bar graphs and charts which display such data as the distribution of goals over various types of outcome, distribution of priorities for the academic year, and the interaction between short-term and long-term goals. This facilitates a better focused discussion of necessary revisions in the IEP. Depending on the software design, computers can use the same files of text and numbers to output reports which are widely divergent in length and presentation mode.

Much more ambitious schemes are also feasible which include computerized goal plan specification, monitoring of progress, and impact evaluation. As in the previous example, important time savings may be realized by transferring parts of these processes to the computer for management. Perhaps the most striking gains can be made in the analysis and report generation connected with monitoring progress toward goals. Again, the social worker need only enter numeric codes for such items as evaluation dates, interventions used, staff responsible, and so on. In turn, depending upon the software, the computer then could assemble a variety of reports which would describe the total history for any student at any point in time. The overall status of children and families receiving social work service could also be characterized to address accountability issues, serve as a basis for advocacy efforts, or review questions of intervention strategy.

A considerable body of literature has evolved over the past decade on successes (and far more pervasively, the failures) of attempts to computerize client records in human service organizations (Ryback, Fowler & Longabaugh, 1981; Sherman, 1981; Soforenko, 1974; Weed, 1969). The lessons to be learned from this mounting body of experience are as follows: (1) Demonstrable time-savings through reduction of administrative tasks can be achieved by professionals who use computer support for planning and decision tasks. (2) Efforts to automate all aspects of a client record in any institution do not seem to survive very long in most settings. (3) Automation of information is a slow process and should be introduced gradually over a 5-year period in small increments which do not make prodigious demands on time of professional staff. (4) Professional productivity does appear to rise in institutions with well-accepted systems, and without apparent jeopardy to quality of service.

## Using Information Technology for Micro-Level Interventions in the Schools

### Computer-Assisted Instruction

Since the mid-1960s, computer-assisted instruction (CAI) has gradually been introduced in the nation's primary and secondary schools. Although actual instructional applications remain much more limited and less integrated into the total teaching environment than proponents had expected, dedicated equipment and software are nonetheless operating in learning laboratories in many institutions (Pogrow, 1983).

The application of CAI to meet the learning needs of special education populations has been attractive to some professionals. Computer equipment can be modified to compensate for physical and cognitive impairments which otherwise present formidable problems in the normal classroom environment. For example, students with severe cerebral palsy who may struggle to produce clear speech can use specially designed computers to communicate with parents, counselors, teachers, and peers. Where children or youth must be homebound for extended periods, a combination of CAI and electronic mail markedly enhances homebound teacher services. And for those who are educationally disadvantaged and lagging behind their peers, CAI is perhaps the most effective means of targetted compensatory education yet devised. Many studies have repeatedly supported the finding that CAI is motivating and stimulates rapid learning gains most in those learner populations with the greatest initial deficits (Dence, 1980; Hallworth & Brebner, 1980; Lautsch, 1981; Molnar, 1972; Murphy & Appel, 1977).

Because behavioral and learning difficulties interact, the school social worker might wish to advocate expansion of CAI for special populations. Computer-assisted instruction is an excellent compensatory tool. But there are also applications which might directly attack problems most often seen by social workers.

The use of CAI to educate children or their families around issues of peer relations, parent-child interaction, pregnancy prevention, work skills, and other social behaviors has had extremely limited development. The conspicuous exception is in automated career guidance software which has a history almost as long as CAI in reading, math, language, and other standard subjects. One of the foremost impediments to CAI applications in social work has been lack of software on the educational market, since private software vendors have not perceived a sufficiently large demand to make production of such software profitable. A few federally-funded projects have demonstrated that social (and not just cognitive) skills can be taught or more accurately, rehearsed, with CAI if careful attention is given to software content and design (Flynn & DiBello, 1985). One firm has recently put out software that seeks to train professionals in better interviewing techniques. Some public domain software teaches relaxation and desensitization techniques. A few medical schools and nursing programs employ CAI that explores sexuality, birth control, pregnancy, and childbirth. These examples only reinforce the picture of spotty and fugitive software availability.

## Computer-Assisted Counseling

With leadership from psychologists, computer-assisted assessment and counseling applications have mushroomed. There are now more than 200 psychological tests which have been automated for delivery and scoring by computer. Experimentation with diagnostic systems has also proceeded with a view toward enhancing the way in which clinicians make judgments. Of most direct relevance to school social work is the use of commercially available computer games as an adjunct to work with children and adolescents. A small amount of evidence indicates that computer games can help strengthen the commitment of adolescents to participation in treatment and help smaller children work through internal conflicts (Allen, 1984; Clarke & Schoech, 1984). The clinician can play several roles, interpreting the child's strategies, commenting on connections between the game and real-life situations, assisting the child in connecting the emotions they feel with their actions in the game, or discussing typical patterns of "timid" or impulsive behavior which the child may display.

The potential connection between computer-assisted counseling and behaviorally-oriented therapies is particularly strong. Proceduralization and other elements in behavior modification theory are well supported by the logic and process of computerization. For example, programs have already been written which teach progressive relaxation, weight control, and stop-smoking strategies (Biglan, Villwock, & Wick, 1979; Migler & Wolpe, 1967). Because these are topics with an appeal in commercial markets, access to software of this type might become generally available to school districts at acceptable prices.

A striking new development has been the use of widely available commercial spreadsheet programs such as LOTUS 1-2-3 for tracking and evaluating client progress in treatment (Brower & Nurius, 1985). Spreadsheets lend themselves well to single subject design research. With some reasonably simple up-front programming which might be done for low cost or by workers themselves, these spreadsheets become a valuable mechanism for observing results of intervention. The report generation features of programs like LOTUS also allow the sharing of results with clients as a form of therapeutic intervention.

### Summary and Conclusions

Information technology is a tool which can transform many of the school social worker's functions in system change, public education, case planning, and direct intervention. Social workers can and must learn to intervene in new ways which shape organizational communications and community networks. They can enhance the quality of information about children's social-educational needs and add to the repertoire of replicable, effective clinical interventions. Failure to seize leadership poses a serious problem because new elites are being created with the introduction of computers; work roles are subtly, but pervasively being redefined.

Trends in the development of information technology suggest that with relatively few exceptions, school social workers should expect access to personal desktop computers in their schools or special education departments within the next five years. These systems will open up wide avenues for network linkages among individuals and groups and should offer a range of computing applications from word processing to database management, while requiring less specialized knowledge to operate than in the past. Computer-mediated communications offer one of the most exciting opportunities for the exercise of traditional social work skills in a new medium. Computer-managed educational plans represent a second fertile ground for more effective practice, notwithstanding the numerous barriers which impede implementation of educational information systems. Computer-assisted instruction, computer-assisted counseling, and word processing applications for clinical recording also offer interesting alternatives at the micro-level.

Perhaps the most compelling issue for school social workers is not whether they should or should not use computers. Rather, the question remains how the profession can best achieve the ends of greater social justice, social integration, and human well-being. Information technology is one force which can be marshalled to serve--or undermine--those aims. In the hands of social workers with humane visions of children and the schools, new forms of social interchange and understanding can be discovered.

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# THE APPLICATION OF MICROCOMPUTERS IN SOCIAL WORK RESEARCH

William P. Callahan and Sharon E. Smaldino

ABSTRACT: This chapter overviews the application of microcomputers in social work research. It includes information related to computer accessibility, training, and software utilization (word processing, databases, spreadsheets, and computer-assisted instruction). Also included is information on available equipment and software resources with a special section on public domain software. All of these areas focus on the applicability of microcomputer software in the social work research process as well as using microcomputers for data collection, storage, analysis, and graphic display.

## Accessibility to Computers

During the past ten years there has been a rapid increase in the availability of computers in public schools. This has been accompanied by the sudden availability of computers in the home, for small businesses, and in almost all components of our daily lives. The accessibility to computers has increased dramatically and can be best illustrated by the fact that all schools in the state of Iowa now have access (either directly in their school or through their local Area Education Agency) to microcomputer hardware and software. Many schools in the state of Iowa have extensive computer labs available for use in instructional programming and hardware and software available to serve administrative applications as well. This recent increase in the availability of computer hardware and software has made accessibility much less of an issue (Zenor, 1987).

However, accessibility is more than just availability. It also includes the opportunity for an individual to gain the necessary prerequisite skills to effectively use the hardware and software. For without these skills the availability of the hardware and software will not necessarily guarantee accessibility. One of the purposes of this document is to demonstrate the broad based accessibility of computer software and hardware to all those involved in roles related to school social work. Additionally, references to support materials as well as individuals should increase the likelihood that accessibility problems related to skills and knowledge will be less restrictive.

This chapter will focus on three major areas: (1) software related to word processing, data base management, and numerical manipulations; (2) computer assisted instruction; and (3) miscellaneous applications of specific software. Additionally, the areas of resources and applications will be covered.

## Computer Usage

Initially, computer utilization was restricted to a few individuals who were able to spend the time necessary to learn difficult programming languages. Also, the availability of hardware was further limited by the tremendous cost of early machines. Today usage has increased dramatically due to the decrease in costs of hardware and software, and an increase in "user friendliness" of computer systems. It no longer requires a high degree of skill nor a large sum of money to become an efficient computer user. Although some uses of the computer (i.e., solving very specific scientific, or complex business tasks) may require extensive programming knowledge, most individuals can benefit from readily available software and become quite competent computer users in a relatively short time. The application of computers to solve the kinds of problems or to do the kind of tasks that most of us encounter on a day-to-day basis has been made much easier through the development of "user friendly" software.

## Training

As with anything that is new and different, there seems to be so many things that need to be done with the computer. Learning to use the computer is relatively easy for the new user if done in a systematic way. Classes and workshops on learning how to use the computer will help ease the way into becoming a user. Once trained, the new user can begin to appreciate the many ways in which computers can simplify the processing of information.

There are several different ways in which a person can obtain training in the use of hardware and software. There are classes and courses available from many different sources. Area Education Agencies

(AEAs) and universities in Iowa offer workshops and courses that teach general use of specific applications. Local hardware and software dealers can offer assistance, either individually upon request or in the form of an orientation class.

There are computer software programs that will train the new user. These programs teach the person how to use the computer generally and programs that teach specific applications. For example, when purchasing a copy of AppleWorks, the publisher includes a computer disk that instructs the new user how to use the AppleWorks program. Prior to using the program, the new user can insert the tutorial disk into the computer and learn how to use the program. This saves a lot of time and effort in trial-and-error learning or in looking through the rather large documentation that accompanies the program.

There are also print materials available to the user. There are many different books and guides that explain generally how to use the computer or specifically how to use a particular software application. These are available in local bookstores and libraries. They are also available from the various user groups and special interest groups locally and nationally. An example of this is AppleWorks for Educators: A Beginner's Workbook (Rathje, 1986). This book comes with a computer disk to let the new user practice some of the steps being taught in the book.

## Software

### Word Processing Programs

Word processing programs allow the user to create an electronic version of written language. This is very similar to any other type of writing but has some major advantages. These advantages include the ability to store for future use one's efforts in a quickly accessible and mailable form that requires little physical space.

Most word processing programs have a variety of features that permit easy modification. The feature most often discussed in terms of word processing program is the ease of revision. Changes can be made as easily as backing up and reentering new information, eliminating the unwanted text. Movement of sentences or blocks of materials is also possible (for example, lifting one paragraph out of a given page and putting it onto another). Using word processing, materials can be easily selected, reviewed, revised, and restored, given the specific characteristics of the desired application. Word processing has not only changed the ease of writing but also the way we think about the process of writing. It has moved as well beyond old limits of typing. One of the significant features to using the computer is the speed in which information can be managed. There are several kinds of utility, or information processing programs that can be used to help the researcher. Included in these utility programs are programs that outline information as a step preceding the actual entry of text.

Word processing uses the computer to manipulate text. With a word processor, the writer can not only put words onto the "page" (in this case the screen), but can make corrections and cut and paste the whole document. This can all be done prior to making a "hard" (or printed) copy.

A word processing program allows the user to easily edit, revise, and format the textual material without having to retype the entire document. Most of the mechanical problems associated with typing are eliminated when using a word processing program. Mistakes, such as typographical errors, can be located and corrected without having to retype the entire page. Many recent word processing programs contain a spell checking component. The spell checker can scan the entire document and identify possible spelling or typing errors. The user can then quickly correct the error. Gone now are the tedious proofreading sessions. There are even grammar checking programs available allowing the writer to concentrate more on meaningful content and less on editorial considerations.

Beyond checking the document for spelling and grammar problems, the word processing program helps the user within the editing process. Additional text or changes within the document can be entered quickly and easily by selecting where to put the text and inserting it. Word processing program allows the user to do more than move text about within a document, but expands opportunities to transport it to another document. The organization of text can be altered with only a few keystrokes. Text can be adjusted to better convey the message intended by the writer.

There are some things that the writer may wish to do but the typewriter does not permit them to be done. For example, manipulation of the margins, subscripting, and superscripting require only a few special commands. The user will see on the screen how changes affect the appearance of the document. Boldface, underlining, or other print styles can easily be incorporated into any or all of the document. Page layout can also be controlled by the user prior to the final printing of the document, even incorporating graphics into the text. Now, electronically, the writer can produce a manuscript that meets his/her personal needs.

The use of word processing programs in the development of survey instruments, instruction sheets, or related evaluation materials can expedite the process considerably. Not only are the evaluation materials easy to revise following the beta test, but they can also easily be stored or transmitted to another site using an electronic network.

There are a wide variety of available word processing programs. Each has unique functions and the user will need to decide which of those are appropriate for individual needs. The general purpose word processing program will suit the needs of most writers. There are many word processing programs available for all of the computers. Some are even compatible with several different computers or will accept documents that were created on different computers. As the user becomes more familiar with the use of a word processor, s/he will recognize the benefit to the writing process.

## Database Programs

Software that allows you to develop a database of information could be called an electronic "Rolodex." Material can be classified by a given characteristic (for example, alphabetical classification) and then entered to include a student's name, address, telephone number, parents' names, and practically any other additional information. Data can then be organized using any of the fields that were entered (for example, alphabetically by student's last name, or alphabetically and within a specific town, etc.). Once the material is organized and included in the database, the database can be searched using any of the fields that were originally identified and entered.

The database can be constructed for individual students, and also for materials or resources necessary to solve specific problems. For example, all community mental health center locations and services could be included in the database and then searched by a specific client need for a particular service. As can be seen, extensive use of database software can assist in the management of, but also speedy access to, required resources.

Other features of database systems are the ease in which the information can be organized into tables and charts. These allow the researcher to organize information in ways that help communicate the manner in which the information is related. The data stored in the filing program can also be printed out in a wide array of different ways. Each entry can be printed or the user can designate which files need to be printed. Further, the user can specify which parts of the information in the files need to be included in the printout. All of this is done electronically, as the user chooses and specifies what information needs to be identified.

### Spreadsheet Programs

Another type of information management program is the spreadsheet. The spreadsheet allows the user to easily manipulate numerical data. A spreadsheet program can be described as a very large sheet of ledger paper. What makes this "paper" so unique is the size and the way in which the columns can be manipulated. The user is free to set up the ledger in a way that is unique for a particular application.

The spreadsheet not only displays the information in the way the user has chosen, but can also do complex and interrelated calculations across the rows and columns. The user can define specific types of numeric calculations that are appropriate for the data that has been entered. The computer will complete those calculations quickly and accurately. One feature that makes the spreadsheet valuable is when a data entry is changed that might affect some of the calculations. Once the entry is changed, the computer automatically makes all of the calculation changes. The user does not need to scan through the entire ledger looking for places that changes need to be made in recalculations.

This application has been most extensively used in business for financial modeling while its utilization in the field of education for planning purposes has been limited. However, with the introduction of integrated software programs where word processing, database management, and spreadsheets are combined, increased opportunities for more extensive utilization are created. Appleworks is an example of such a program.

### Numerical Manipulation

The utilization of a spreadsheet to support the research process can occur in a variety of ways. For example, budget preparation for proposal submission, data analysis not supported by specific statistical packages (see section on statistical packages) or finally for specific research or data collection activities. Using the spreadsheet for data collection can be accomplished by preparing templates of questions and opportunities for the subject to enter appropriate responses. Upon entry the synthesis of individual responses could be accomplished automatically by the spreadsheet. Following the response from the subjects the experimenter can easily produce reports and generate output to use in the analysis process. A desirable feature of spreadsheet software in this regard is that the calculations and report generation component can remain transparent to the subject while presenting to the subject only the information necessary for response purposes.

## Computer Assisted Instruction

Computer assisted instruction can be divided into drill and practice, tutorial, and Simulation Software. Drill and practice software allows the student to receive constant opportunities for independent as well as guided practice in a nonthreatening and carefully structured environment. Tutorial software provides the opportunity for students to gain or acquire new information and to be tested over that information with the opportunity for remedial input based on student response. Simulation software allows the student to simulate a particular environment and to calculate the logical extension of changing variables in that given environment. For example, simulations of an ecosystem can be created and the effect of the elimination of one of the elements of the ecosystem can be calculated once the adequate data has been provided to the computer.

Many of these programs can be created using existing software known as drill and practice "shells" or authoring languages. Using these programs the developer need know little about computer programming and need only input the instructional information necessary for student learning to take place. Once this information is entered the computer program itself will restructure the information in ways that allow the student to use it for drill and practice or tutorial applications.

## Miscellaneous Software

Additional software is available to support very specific applications of computer hardware. For example, grade book programs to assist teachers in the collection and analysis of student performance information. Experts system software allows the user to simulate the thinking of an "expert" in the field and then to answer questions based on the way the "expert" thinks about and would answer those questions. Specialized software for the development of printed signs, posters, cards, and certificates is also available. These can be used as motivational devices for students or simply as an opportunity to become familiar with microcomputer hardware. There also exists an abundance of computer games that allow students to use microcomputer hardware for purely recreational or leisure activities which may or may not show benefit for the student depending on the therapeutic application of such programs.

## Software Resources

### Statewide

Software can be obtained from a variety of resources. Many schools cannot afford to obtain and maintain a large library of computer software on limited school budgets. There are several alternatives available for obtaining software. Among those alternatives is to obtain software through a centralized system.

In Iowa one form of the centralized system is the Area Education Agency system. There are fifteen AEAs, each serving a region within the state and each AEA is centrally located for the population within the region. The AEA provides both consultative services and a lending library of software. The AEA system allows a member of a school staff to borrow software for a limited period of time. The school does not have to purchase the software in order to be able to use it.

The lending library approach to using software has its advantages in that there is little or no expense involved with obtaining the program. The user can select from a larger possible list of selections than if limited to the programs purchased by the school district. Additionally, the software package may have been used by more people, providing a large resource base from which to obtain assistance.

This type of system has its limitations also. Among the most obvious is the availability of the software. The user has a limited time period in which to use the materials, thus limiting the possible applications for a particular package. Further, the software may not be available at the time it is needed. And since a large number of people use the software, it can become damaged or additional materials, like program documentation, may be lost.

Another type of state-wide computer software system is through the Iowa Computer Consortium. The consortium is less structured than the AEA system. The amount of software and assistance available is limited.

Public Domain/Shareware

Public domain software has been in existence since the early stages of microcomputer use. This category of software refers to the programs that were generated or created using public funds, either state or federal. Because of the public funding sources, these programs must be made available to anyone who might be interested in using them without charge or a minimum cost charge.

The advantage of using this kind of software is that there is little expense involved in obtaining the program. Also, since there are no copyright restrictions it is possible for the user to change the program to meet individual needs. This is usually not very difficult, but may require some assistance from a more experienced user.

Another type of software available is shareware: user-supported software. The difference between shareware and public domain software is that the authors of the programs have elected to market their software directly. Any copies or changes that the user wishes to make will need the approval of the author. By having the authors directly market their software, it is possible to obtain the software at a reasonable price.

The advantage of shareware over public domain software is largely in the amount of assistance the user will find available when using the program. Generally speaking, when using public domain software the user will find little or no documentation or assistance from the developer. With user-supported shareware software, the authors of the programs are available and will work with the user. Documentation usually accompanies this type of software.

While there are a large number of computer programs that fall into these two categories, locating them can be rather tedious. There are some resources available to assist in locating shareware and public domain software. These sources generally serve as clearinghouses, making it possible to obtain a copy of many programs. Some possible resources for obtaining public domain software and shareware include:

1. The Public Domain Exchange, 2074C Walsh Ave., Santa Clara, CA 95050. This organization has published a book, The Best of Apple Public Domain Software, edited by Judy Rosenthal. This book lists the available software for the Apple Computer. There are many categories of software listed, including Education, Tutorials, Utilities, and Communication, to name a few.

2. EDUCOMP Computer Services, 742 Genevieve, Suite D, Solana Beach, CA 92075. EDUCOMP is a Macintosh users group. The catalog provided by EDUCOMP lists the public domain software available for Macintosh computers.

3. Zephyr's Exclusive Software, Zephyr Services, 306 S. Homewood Ave., Pittsburgh, PA 15208. Zephyr offers a limited array of software for both the Apple II series and the IBM PC/XT/JR series. The catalog is organized into categories: Home & Office, Personal Use, Astronomy, and Education.

4. The PC-SIG Library, PC-SIG, Inc., 1030 E. Duane Ave., Suite D, Sunnyvale, CA 94086. The PC-SIG Library offers a large collection of user-supported and public domain software for the IBM-PC. There are two categories of software listed, Applications and Utilities.

5. The IBM-PC Public Domain Software, Volume 1, edited by Gary Phillips, is a catalog available for locating public domain materials designed for the IBM-PC. It is available from Ashton-Tate, 10150 West Jefferson Blvd., Culver City, CA 90230. There are a wide array of programs listed including communications, utility packages, graphics, etc. Also included are lists of PC-User Groups, Bulletin Boards, and a section on curing the common PC problems.

## Suroski Center

The Suroski Center at the University of Northern Iowa develops and distributes microcomputer software related to education. During the past five years over fifty disks full of educationally related software have been developed at the Suroski Center. Thousands of copies of these disks have been distributed throughout the state of Iowa at a cost that covers the duplication charges. All programming for the software has been done by work study students under the direction of full-time faculty members. The original ideas for most of the software came from practicing teachers in various disciplines. This software is constantly under revision and is available to any teacher in the state of Iowa who sends a blank computer disk, a postage paid return envelope, and the appropriate identifying information for the desired software. The center receives no ongoing support and is housed in the Faculty Development Center, College of Education, University of Northern Iowa, Cedar Falls, Iowa 50614.

Software includes database programs containing information on adapted instruction materials for use by special students, adaptation technique software for accommodating the needs of special students, and a variety of specialized instructional software. Instructional software may include the development of arithmetic, spelling, keyboarding, or computer literacy materials. Additionally, using the FrEd Writer program there are a variety of data disks containing over 1000 pages of instructional materials for use by special students in a variety of areas including daily living skills and social skills instruction. Also available is software to teach problem solving skills as well as assessment and programming information in leisure education.

The Suroski Center also supports the distribution of print materials but only until those materials can be converted to electronic format. An example of such print materials would be Work Experience Coordination modules or the Community Based Vocational Training materials.

### Available Consultative Services

It is when first learning the computer that a new user appreciates the availability of knowledgeable resources. Human resources include a wide array of possible people, most very conveniently located. The Area Education Agencies have a computer resource person to help in any way. Many of these people have developed workshops and training programs for new users to learn to use the different types of software available. They are readily available to the people within their region to help with computer application. A listing of consultants and their addresses can be found in Appendix A.

There are other resources available to the new user. Nearly every computer sales store has personnel who are familiar with the software that is specific to their particular product line. These people are generally very happy to help their customers learn to use hardware and software more efficiently. Some computer stores have expanded to include computer training classrooms within their store and teach specific software applications. These classes tend to be very short in duration, but do attempt to teach the basics so that the new user can begin to work independently.

In addition, there are people available at the universities within the state of Iowa. Both of the authors of this chapter, Dr. William Callahan and Dr. Sharon Smaldino of the University of Northern Iowa, are available for consultation. Both have had extensive experience in using the computer within the research process and can provide assistance in many different ways. They also offer courses at the university that will teach some of the basic and more complex procedures on the computer.

Another resource is the local users groups that may exist within your region. The members of the users groups tend to have a variety of experiences with computer use. Most of the people involved are very interested in learning more about the computer and the variety of applications. Nearly all of the members are very willing to help a new user if possible. The user groups are usually organized according to a specific hardware choice, i.e., MacUsers, IBM-PC users, etc.

Finally there are telecommunications networking resources. With the use of a modem it is possible to connect the computer through a network system, like Compuserve, to anyone else's computer anywhere. The system even allows the user to connect with several different people. The possibilities for connecting with resources becomes nearly endless.

## Using Computers for Data Collection

Specific application of microcomputers for use in the data collection process could include information on types of errors students make as well as frequency of those errors. Additionally, microcomputer software or management software can be used to collect information on frequency of response or frequency of assessment as well as to measure the correctness of a given response. An example would be the program called Spelling from the Suroski Center. This program presents words (entered by the teacher) to students and then asks the students to enter the word after a specific delay. As the student attempts to enter the word the computer software determines whether or not the entry is correct, prevents the inclusion or the opportunity for erroneous practice by preventing the student from entering anything but the correct response, and can be modified to record the incorrect response that the student attempted to make. In this way the teacher can collect specific data on student performance.

Additionally, computer software is available for the development and presentation of specific questions to the student, the opportunity for the student to respond in a Likert Scale fashion to the data, and then the collection and storage of that data for future use. This could be used in survey research where a single disk could be used by hundreds of subjects, and the data collected and organized as the subject responds.

Programs are also available that allow the subject to enter a written narrative response and then store that response for future analysis.

## Using Computers to Store Information

The use of computers to store large quantities of information is well documented in a variety of applications not only in public school settings but in business and military settings as well. Large databases can be accumulated, stored, and easily transmitted from one point to another either through the use of disk material or the electronic transmission of information. An example of a practical application for using computers to store educational information is the daily living skills materials available from the Suroski Center. Contained in these materials are learning activity packs in six different areas varying in length from four to twelve pages. These materials account for some 600 total pages of information and can be stored easily on three computer disks. These disks also contain the access information and a narrative documentation on how to effectively use the word processing program in which all the materials are stored. Also stored on the same disks are instructions to the teacher on assessment and delivery of materials in this content area.

The storage of either qualitative or quantitative research information can be facilitated through the use of any number of microcomputer programs. For example, database programs or word processing programs could both be used to store or develop a database for research purposes. (See database and word processing for examples of those types of programs.)

## Using Computers to Analyze Data

When a researcher has collected the data related to the study, it is necessary to examine that data to identify its importance. A statistical package can very quickly and easily manipulate numerical entries. There are several types of computer programs available for the researcher to use for statistical analysis.

One program that is available that falls into the category of public domain is the Steinmetz Statistical Package. The program is designed to work on the Apple II series. The program has several types of data analysis available including t-tests and Analysis of Variance tests. Several commercial programs also are available for microcomputers and are written for the purpose of analyzing data.

Statistical analysis packages are available on the very large, mainframe computers. The two most commonly used are the Statistical Analysis for the Social Sciences (SASS) and the Statistical Package for Social Sciences (SPSS). Both use the large mainframe computer and are capable of more complex and interrelated statistics. The three Iowa regent universities have mainframe computers with one or both of these statistical packages available.

## Using the Graphic Display Options

Information that is presented graphically helps to convey the intended message. One problem is when the writer has to produce these types of charts by hand. Not only is this tedious, but it is very time-consuming.

There are an array of computer programs available that will make this process easier for the user. As mentioned previously, the database programs often have a report formatting component. Thus, the data that is stored in the database files can be efficiently and quickly compiled into a chart or table.

But there are other types of graphing programs available that do more with the data than list information in charts or tables. There are programs available that will reorganize the data into plotted displays such as line charts, bar charts, and pie charts. The data is not changed, but the program uses the numeric information to display it in a way that will graphically represent the information. These types of programs tend to be very easy to use and are generally menu-driven, which means that the program directs the user as to the steps involved in creating the particular type of display chosen. It is also possible to use these types of programs to "try out" several different graphic charts to decide which best displays the information being communicated.

## Conclusion

The microcomputer may appear to be a very complex and difficult tool for the individual to use, but it can really make the research process very efficient and easy. It can remove some of the drudge and difficulty out of the research process and open up the possibilities for the researcher. Now the individual can concentrate on the research process rather than having to deal with issues that the computer can so quickly and efficiently handle. By using the computer to do some of the more routine and repetitive jobs, as well as complex computational and graphic tasks, the researcher is using the computer effectively.

## ABOUT THE AUTHORS

Dr. William Callahan, Associate Professor, Department of Special Education, University of Northern Iowa has worked on the development of approximately twenty different pieces of microcomputer software as well as forty interactive video programs utilizing microcomputers and video presentations. His doctorate is in Special Education from the University of Florida and he has done research in a wide variety of areas related to the applicability of microcomputers for utilization in Special Education classrooms.

Dr. Sharon E. Smaldino is an Assistant Professor of Educational Media and Computer Applications in the Department of Curriculum and Instruction at the University of Northern Iowa. Her primary areas of interest are in the areas of instructional development and the integration of technology into instruction. She is currently engaged in the development of computer-based instructional materials and research in computer applications.

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Zenor, S. (1987). For Starters. *Tech Trends*, *32*, 2.

# Appendix A

## Area Education Agency Consultants

AEA 1
Clem Steele
1473 Central Ave.
Dubuque, IA 52001
319-556-3310
1-800-942-4668

AEA 2
Larry Niebur
Clear Lake, IA 50428
515-357-6125
1-800-392-6640

AEA 3
Keith Dwire
PO Box 38
Cylinder, IA 50528
712-424-3177
1-800-242-5100

AEA 4
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102 S. Main Ave.
Sioux Center, IA 51250
712-722-4378

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AEA 7
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AEA 10
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4401 6th St. SW
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319-399-6734
1-800-332-8498

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Johnston, IA 50131
515-270-9030
1-800-362-2720

AEA 12
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Sioux City, IA 51106
712-274-6080
1-800-352-9040

AEA 13
Don Tischer
RR 1, PO Box 1109
Council Bluffs, IA 51502
712-366-0503
1-800-432-5804

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Creston, IA 50801
515-782-8443
1-800-362-1864

AEA 15
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Ottumwa, IA 52501
515-682-8591
1-800-622-0027

AEA 16
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1200 University Place
PO Box 1065
Burlington, IA 52601
319-753-6561
1-800-582-2381

# THE ART OF PREPARING AND SECURING GRANTS

Nora S. Gustavsson

ABSTRACT: An easy to read guide to the complexities of grant procurement. The chapter outlines the steps involved in the actual writing of a grant with particular attention to organizational variables, budget, needs assessment, goals, and methods. Also provided is a comprehensive directory of grant resources. The directory lists information sources for private foundations and government grants.

Grant money is still available from hundreds of private foundations and the federal and stage government. The trend at the federal level (since 1981) to reduce domestic spending has resulted in a decrease for funding of government grants. Nevertheless, in 1986 the National Institutes of Health (NIH) reported approving, thus making eligible for funding, 16,763 of the 18,675 applications for research project grants in fiscal year 1985. NIH funded 6,247 (about 37%) of the approved applications: a 14% increase in the number of grants funded from fiscal 1984.

This chapter is organized into three areas and describes the processes involved in the pursuit of grants. First, the researcher needs to examine organizational variables. Grant activity is expensive in terms of indirect as well as direct costs. In an era of declining resources, organizations may not be able to afford the costs of pursuing grants. Second, the grant seeker needs an understanding of the grant writing process such as developing goals and preparing a budget. Third, the grant seeker needs to know how to obtain information on the many private and public agencies which fund research grants.

## Organizational Variables

Resources are a major organizational characteristic which will influence the pursuit of grants. In an era of declining resources organizations may be less willing or able to encourage grant activity. Contrary to popular opinion, applying for grants can be expensive. The costs associated with grant applications are indirect as well as direct, and can total hundreds of dollars per grant application. You must consider whether your organization can afford the costs of pursuing grants.

One significant indirect cost is time. Depending on the type of grant, weeks of planning may be needed. Clerical staff will have to allocate their time to support the grant seeking activity. These indirect costs may not be recoverable.

Even grant proposals which are funded require the organization to allocate resources. Many grants require cost sharing or matching funds. The government and most foundations will not assume the total cost for your project. Foundations and the government view the grant as "seed" money. The percent your organization will contribute depends on the funding source and the length of the project.

Your organization may contribute anywhere from 10 to 60 percent of the cost of your project. If your project is funded for two or more years, your organization will be expected to pay an increasing percent of the costs each year. You may want to consider the long-range funding capacity and the mission of your organization before applying for three- or four-year grants.

You might also need to be wary of longitudinal studies if your organization is in the process of serving changing populations and needs. The field of education is subject to constant change. There is little value in applying for a three-year grant to study the effects of college preparatory courses on student self-esteem if the school has committed a substantial part of its future resources to developing vocational programs. Your research interests must serve both the long- and short-term goals of your organization.

While money is an essential resource, you may need other resources in order to pursue your proposal. For example, if you apply for a demonstration grant, you may need people with special expertise who are not part of your organization. Demonstration grants provide funds for a feasibility study. If you wanted to test whether a newly developed treatment for adolescent substance abuse is effective you might need specialized personnel who are not part of your organization. You will then have to allocate additional time and money in order to recruit specialists.

Organizations are subject to political pressure from the environment. If you are interested in research in a politically sensitive area other variables will need to be considered. For example, you might be interested in evaluating the effect of school based health clinics which distribute contraceptives on the pregnancy rate of adolescents. After researching foundations you find that grant money is available for this purpose. Before applying for the grant you will need to determine if your organization can and will support your research project.

These organizational factors should not be overlooked since they do influence grant activity and should be considered by reseachers. The failure to recognize the importance of the organizational environment can result in the loss of the grant or in the inability to complete the research.

### Writing The Grant

After analyzing the organizational context you will be ready to begin writing the proposal. Begin the first draft as soon as possible, and well before the deadline for submission of the grant. Keep in mind that you are working on a first draft. You need not be concerned with syntax, statistics, or references for this draft. The first draft will be a starting point that will help you focus and refine you ideas.

After obtaining the application form and instructions from the funding agency be sure to read them. This sounds simple, but failure to check the forms for accuracy and currency could cause a delay in the processing of your proposal. Application forms are frequently revised since there are a number of federal departments which fund research grants. Standardized application forms and sets of instructions would make the application process easier, but standardization is not a reality.

Failure to complete forms or follow instructions could result in losing the grant. If instructions appear confusing call the funding officer for clarification. The instructions usually include the name and telephone number of a funding officer. Do not be afraid to call this person since part of their job is to help applicants and explain procedures.

Note the deadlines for submission of grant proposals, and the number of pages you will need to send to the grantor. Some grant proposals to foundations consist of two pages while grant proposals to some federal departments consist of 75 pages. Some federal agencies ask researchers to send a letter of intent to apply for a grant by a specific date (usually shortly after the announcement is released) although the application may not be due for months. Be sure to send the letter of intent and note all deadlines.

Applications will describe any unique or special requirements for funding. For example, some grantors favor proposals which use a multidisciplinary research team, while others will only fund non-profit organizations. Some foundations want grant applications to have community support. You may need to submit letters of support from other organizations or indicate that other organizations will serve as referral sources or will provide volunteers. A research grant (which is designed to support the research capabilities of promising individuals) from NIH, for instance, require the applicant's organization to free all the applicant's time for research.

The proposal should be specific yet applicable to a broader audience. For example, instead of exploring methods for retaining talented teachers in your low-paying school, suggest a project which will develop other methods of retaining teachers which could be used by public schools throughout the United States.

Proposals will ask for a statement of the goals, methods, and objectives of the research. A goal is a general statement about the purpose of the research; based upon the goal clearly measurable objectives will follow. Objectives are specific, obtainable, and practical while method refers to how you will achieve your objectives.

If your research is concerned with the broad goal of reducing the number of adolescents who leave school, one objective might be to reduce this number by 30% during the first year of the project. This is a measurable, time-specific or time-oriented objective which requires knowledge of the current dropout rate. The current rate is a baseline which can be used to measure the objective. A method for achieving the goal might be counseling sessions.

Before identifying some of the common areas in most grant proposals, it is necessary to say a few words about writing style. Grant applications will ask for a description of the proposed research. This narrative section gives the researcher the opportunity to communicate clearly and dynamically with the reviewer. Write in a coherent style using the active voice and simple sentence structure--avoid jargon and rhetoric. A number of people will review your application and some of them may not be familiar with technical terms. The harrative should emphasize that people will benefit from the research. Try to keep the reviewers' interest by using descriptive language.

### Review the Literature

Neither the government nor foundations are interested in funding research that is a replication of already existing or currently funded projects. One way to avoid the rejection of your proposal is to make sure that no one else has researched your specific topic. This requires an extensive review of the literature. You may wish to check with the foundations or government departments which fund projects on your topic to find out what is currently being researched.

NIH (1986) suggests researchers thoroughly review the literature to identify weak areas in theory, practice, or method. Lack of knowledge about the relevant research in your area may cost you the grant. Let the reviewers know you have done your homework and include a list of references with the application. Some foundations require a reference list, although an enumerative bibliography is not necessary. Simply list the most relevant and recent references.

Do not neglect to mention how you will share the results of your research. Most federal departments require an annual report. Other federal departments are interested in research that can be replicated in other parts of the country. If this is a requirement (read the instructions), you will have to have a plan for sharing your results with a broad audience. Some foundations want to know their money is being spent to serve the public good, therefore dissemination of your findings will be expected.

Findings can be shared in a variety of ways. You can publish a book or article, present your findings at a regional or national conference, or set up training sessions at locations throughout the state or country. The dissemination of your findings is a valid cost which you should include in your proposed budget.

## The Needs Statement

Grant proposals usually ask for a needs statement. This statement should clearly explain why your research is important and needs to be done. Funding agencies have priorities based upon the needs they have identified. There may well be urgent social needs which are not defined as such by those with money. Your needs statement should match the needs identified by the funding agency.

In order to submit the needs statement you may have to do a needs assessment. Needs assessments can take a variety of forms. Some types of needs assessments are inexpensive and quick (the key informant approach, the community forum, rates under utilization). Other needs assessments are more methodologically sound and valid but expensive and time-consuming (the survey method).

If you are unsure of how to do a needs assessment there are a number of helpful resources available. In 1976, the National Institute of Mental Health published a manual for program evaluation which included an easy-to-read, yet comprehensive chapter on needs assessment. Most texts on social welfare planning include chapters on needs assessment and most libraries will have these materials.

## Preparing A Budget

All grant proposals require a budget, and application forms usually provide instructions on how to prepare a budget. The budget is a statement of how much money you will need in order to complete the research.

Some researchers assume that grantors reduce proposed budgets and therefore inflate the budget to insure the availability of sufficient funds to complete the research. Other researchers assume that underestimating the budget makes their proposal more competitive and increases the likelihood of funding. Grantors advise researchers to resist these temptations.

Your proposal may be rejected if you seriously underestimate the cost of your research. Keep in mind that reviewers are knowledgeable about costs as well as your area of interest. Reviewers may wonder if you understand the requirements of your research or whether you have committed a simple oversight.

If it is funded, you could be in worse trouble. Trying to complete research that is underfunded is difficult, if not impossible. Someone will have to assume the additional costs. You will constantly be reminded of what you cannot do because of your mistake. The results you hoped to attain through your research may not materialize.

Likewise, your proposal may be rejected if you seriously overestimate the costs of your research. Reviewers have an idea of what your research should cost. Outlandish charges will catch the attention of the reviewers and they may wonder if you know what you are doing. They may wonder about your motivation in applying for a grant.

Your budget will include both direct and indirect costs. Some grants include a third category of costs if the grant you are seeking requires cost sharing or matching funds. Direct costs are those associated directly with your research and include items such as salaries and fringe benefits for the principal investigators and assistants, equipment, supplies, and travel. The costs for salaries should include any changes (especially if your proposed research will take more than 12 months to complete) such as merit increases or cost-of-living adjustments.

It is difficult to know exactly what these costs will be so develop three levels of estimated costs: low, medium, and high. These estimates establish what can be done at various funding levels. In order to increase the probability of being able to complete the research without having to constantly focus on expenses, use the high range of costs in the proposed budget.

Supplies and equipment costs can overlap. If you will be using equipment in your research, obtain estimates from at least two companies and include the estimates in your application. For example, if you plan to use aversive conditioning in a project to reduce alcohol consumption, you may need to rent or purchase a machine that will deliver electric shocks. Office supplies (file cabinets, chairs, typewriters) may also fall into the equipment category. Supply costs generally refer to expendable equipment which costs less than $500 and has a useful life of less than two years.

There are other direct costs which may be incurred if your research requires the use of community based offices. Be sure to explain to the grantor why the research cannot be conducted in the facilities available through your organization. If the office is not furnished, equipment will have to be rented or purchased. Communication costs such as telephone and postage are direct costs which should be included in the proposed budget.

Consultants and outside services should not be overlooked during the budget process. If you will need legal services, medical consultations, or bookkeeping services, obtain estimates and include these costs in the budget. If the grant you are seeking requires cost sharing, it may be prudent to have these services donated.

Indirect costs are more difficult to calculate and are easily overlooked. For example, if your research is conducted in your work location it would be impossible to calculate the cost of electricity, water, or heating used to support your research. If your agency will be handling the disbursement of checks for equipment, salaries, and supplies, or providing janitorial service, then your agency is contributing indirectly to the cost of your research.

Many grantors require cost sharing. This does not mean that you or your agency must contribute cash. Indirect cost sharing is acceptable to most foundations and the federal government. Examples of indirect cost sharing include contributions such as donated legal advice, volunteers, or donated facilities and equipment. Your agency can contribute to cost sharing by reducing your usual work load thereby giving you time to pursue your research. A talk with the funding officer listed in the grant application can help you identify and quantify these costs.

Review the proposed budget carefully since one misplaced decimal point could result in a rejection of your grant. Try to locate errors by comparing the budget and the proposal. Ask a colleague who has received a grant to review your proposal. You may wish to ask someone who is not familiar with your unique field of practice to review the application. This person can locate jargon and ask relevant questions about your purpose, methodology, and objectives.

If your grant application is rejected write a letter thanking the organization for considering your application. Also ask the organization to share with you the reasons for the rejection. You can use the rejection as a learning experience.

Now that you have some understanding of the grant process, obtain a grant application. This will help you to think in terms of grant writing and familiarize you with the language of grant applications. For example, the Department of Justice (DOJ) in July of 1987 was interested in funding research which would develop, assess, test, and disseminate community approaches to juvenile gang problems ("Juvenile Gang," 1987).

Potential applicants were given the names, addresses and telephone numbers of two officials in the Office of Juvenile Justice and Delinquency Prevention. Researchers were expected to review the literature in order to determine the extent of youth involvement in gangs, establish a program advisory committee, and to evaluate existing approaches to this problem. The announcement listed the maximum award at $500,000 and the initial budget period was two years. Public and non-profit organizations which had some experience with juvenile gangs were eligible to apply.

Applications had to include a statement on the goals and objectives of the research, a method for achieving the objectives, and a budget. The deadline for submission of the application was identified and the narrative was not to exceed 70 pages. Most federal grants provide the same type of information and instruction as did this announcement from the DOJ. Read as many grant announcements as you can until you become comfortable with the language and requirements for grants.

## Grant Resources

One decision you will have to make when you consider funding is whether you want public money or private money. Private money generally offers the researcher more freedom. Grant applications to foundations usually consist of less than five pages. However, public money supports more research than private money. Since private money represents fewer restrictions, some researchers will pursue foundations first. If foundation money is not available or not sufficient for the goals of the research, then they will pursue federal money.

Foundations receive about a million requests for funding annually and fund about seven percent of these requests (Kurzig, 1980). In order to use your time productively and limit the indirect costs of applying for a grant, research the foundations and try to match your project with their interests. Foundations clearly state their purpose and priorities.

The most useful source of information about foundations can be obtained through The Foundation Center, 79 Fifth Avenue, New York, New York 10019. This organization collects and distributes information about foundations. The Foundation Center has four libraries and maintains 140 regional collections. There may be a regional collection in your state. Your local public library should be able to direct you to a regional collection. The Foundation Center has a toll-free number 800/424-9836 or you may call the New York office at 212/620-4230.

The Foundation Center is supported by more than 300 charitable institutions and publishes a number of books useful for researchers. The Foundation Directory (1985) provides information on more than 4,000 foundations. They are listed by state and each entry describes the purpose of the foundation, activities, directors, application procedures, and contact person. The directory costs approximately $60 and a supplement is usually available for about $30. This book may also be available in your local library.

The free publication from The Foundation Center is the "Information Packet." It lists publications and locations of libraries with Center materials. Annually the Center publishes the Foundation Grants Index which describes the grants of 300 of the largest foundations. The index is updated every two months in the Foundation News.

There are other directories of funding sources. The Annual Register of Grant Support (1985) organizes foundations by topic, not geographic location. Some of the topic areas in the report are humanities, international affairs, special populations, urban and regional affairs, and education. Under each of these broad areas specific topics are listed. For example, under education there are topics such as elementary and secondary education and educational projects and research. Under the urban and regional affairs section are topics such as children and youth, crime prevention, social welfare, public health, and community development and services.

One of the more expensive sources of information about foundations is available from The Taft Corporation, 5125 MacArthur Blvd., NW, Washington, D.C. 20016. They publish the *Taft Foundation Reporter* and two monthly newsletters, the *Foundation Giving Watch* and the *Foundation Update*. They provide information on 500 major foundations. These publications cost $347. The telephone number of The Taft Corporation is 202/966-7088.

The Grantsmanship Center, located at 1031 South Grand Avenue, Los Angeles, California 90015, publishes the *Grantsmanship Center News*. This periodical costs approximately $20 a year and offers the reader information on grant writing as well as a listing of available grant opportunities. Their toll free telephone number is 800/421-9512.

*Information America* (1983), while not devoted to grants, may be a resource for researchers who are unsure of the latest developments in their fields. The book lists sources of material from organizations, industry, and government. The material is organized by topic. For example, under education organizations are listed which provide information services for handicapped students, curriculum development for exceptional children, and training and resource directories available for teaching social studies. *Information America* is published three times a year and an annual subscription costs $80.

There are two periodicals which contain current information on grants. *Grants Magazine* provides examples of grant applications which have been funded. These examples help the reader to identify the elements in a successful grant application. Try to read proposals which have been funded. The second periodical is expensive. A subscription to *Federal Grants and Contracts Weekly* also contains current information but costs $280 a year. Many libraries carry this periodical.

*Federal Grants and Contracts Weekly* is an easy-to-read list of federal grants currently available. There are two especially helpful features in this magazine. The "Grants Alert" section lets the reader know quickly which federal agencies are funding research and in which areas, the deadline for submission of applications, the amount of grants, a narrative describing the scope of the program, and the name and telephone number of a contact person. The "Grants Calendar" section quickly alerts the reader to the deadlines for applications.

## Directory of Federal Grants

Locating information on foundation money can be time consuming. Locating information on federal grants can require great perseverance since there are hundreds of federal offices which administer grants.

The basic source of information at the federal level is The Catalog of Federal Domestic Assistance. Try to obtain a copy of this publication. This catalog consists of about one thousand pages, and it describes almost all federal programs designed to help the public. The programs are listed alphabetically and it takes time to learn how to use it. The Catalog is usually published in the Summer and costs about $20. It can be ordered from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or call 202/783-3238. This book is also available at any of the more than 1400 depository libraries and any of the 50 regional Federal Depositories. For a list of libraries which carry government publications write to Library, Public Documents Department, U.S. Government Printing Office, Washington, D.C. 20402.

For a list of more than 500 subscription services that are published by more than 40 federal agencies, write to the Superintendent of Documents and request Government Periodicals and Subscription Services, Price List 36. It is free.

While an excellent source of information, the Catalog can be out of date. For the most current information, consult the Federal Register. The Federal Register is published daily and is available in many libraries. A subscription costs about $50 a year. It contains much information that is not directly relevant for the researcher. Nevertheless, federal regulations require that funding rules be published in the Register. Eligibility requirements, application procedures, and deadlines for submission of research proposals are published in the Register.

For information on federal contracts up for bid, you may wish to look at the Commerce Business Daily (CBD). However, it is difficult to read and much of the information is not of direct value to potential researchers. Grant announcements are published but you will have to muddle through pages of difficult reading. A yearly subscription to the CBD costs about $100. Reference copies can be viewed in many libraries.

You may wish to write directly to the federal departments working in your field. Most of the departments maintain a mailing list for program announcements. They will send you material free of charge if you are on their mailing list.

If you require additional sources of information on federal funding, there are a number of publications which may be of help. The Congressional Quarterly Weekly Report which is published privately, will provide current information on pending legislation. A subscription costs more than $500 a year. For about $300 a year you can subscribe to the Federal Contracts Report which is available from the Bureau of National Affairs, 1231 25th Street, N.W., Washington, D.C. 20037.

Computers have helped to make the process of locating information easier. A database has recently been developed which permits computer searches of the Catalog of Federal Domestic Assistance. The Federal Assistance Programs Retrieval System (FAPRS) was developed by the U.S. Department of Agriculture. For information on how to use the database, write to FAPRS Administator, Rural Development Service, USDA, Washington, D.C. 20250.

## Summary

The process of writing and securing research grants requires skill and perseverance. To increase the probability of funding, submit your application to an organization interested in your research and carefully prepare and review the grant application.

Remember, do not give up. It may take time, but you will find a match between your research and a funding organization.

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# SECTION FOUR

# WRITING FOR THE PROFESSION: DISSEMINATION OF RESEARCH AND PRACTICE KNOWLEDGE

# OVERCOMING OBSTACLES TO PUBLICATION

James G. McCullagh

ABSTRACT: Practitioners who want to publish need to be aware of and overcome obstacles to writing for the profession. Reasons for publication and suggestions for overcoming specific obstacles are proposed. Advantages of coauthorship, support groups, and a joint work program are discussed as strategies to facilitate writing efforts and to offset the frustrating, time-consuming, hard work that is required to break into print.

School social workers practice in the field but often don't write about it. Professors write but usually don't practice. The solitude offered to the academic is far removed from the reality of school social work practice. While some practitioners conduct research and write for publication and some faculty do not, different performance expectations exist for both. The "publish or perish" cliche is often true, especially for the non-tenured academic on many campuses. Both faculty and practitioners experience tension between writing and doing, but the practitioner primarily is expected to provide professional services and not research and write. While neither the opportunity nor the necessary release time from practice is normally provided to school social workers, the practitioner who wants to write for professional publication must surmount a variety of obstacles.

## Writing for Publication: Is It Worth It?

### Why Write for Publication?

For the academic--the scholar--"publication is a need, a natural activity flowing inexorably from the work in which he is enmeshed and absored. He is his own motivation to learn and to publish" (Stephens, 1976, p. 198). Fox (1985) stressed that "sustained research and writing form a vocation, a calling, as much a choice of how to live as how to work" (p. 13). For the scholar "writing and publishing are not simply responsibilities; they constitute a great opportunity. They allow one to participate in, contribute to, and receive recognition from the discipline" (Fox, 1985, p. 14).

Life for many academics is the pursuit and communication of knowledge. They feel a need, a burning desire, an urge to learn and to know and then to communicate understanding to others. Berger (1988, p. 287), however, suggests that "a primary motivation for publishing is that it enables the academician to keep his or her job and to advance in it. Publication is the cornerstone of a system in which the academician struggles to retain a position of power within the profession". The academic, nonetheless, is provided time in the academy--the university--to be a scholar. Such oportunities are rare for practitioners.

Why then should practitioners publish? The NASW Code of Ethics (1980) recognizes the responsibility of social workers to develop knowledge. They "should take responsibility for identifying, developing, and fully utilizing knowledge for professional practice" (p. 9). The Code further indicates that "the social worker should contribute to the knowledge base of social work and share research knowledge and practice wisdom with colleagues" (p. 9). The NASW Standards for Social Work Services in Schools (1978) also provides strong support for a research based practitioner. Williams and Hopps (1987) note that "insufficient attention [is given] to intervention research" (p. 374) by the "most active writers [who] are academicians" (p. 374). They stress that "more practitioners must view publication as a normal part of their practice role" (p. 374) in order to achieve "better balance in professional social work literature" (p. 374).

The motivation simply may be that one believes that one has something to say that is unique, worthwhile, new, or different and that will contribute to knowledge development or practice understanding for professionals. One may wish to share one's knowledge, research findings, or practice wisdom. The search for fame, status, acknowledgement, promotion, change of positions, a new challenge, or an increase in salary also can be motivators. Ideally we seek to publish because we have something to say--but we also realize that additional benefits may accrue to the author and especially to academicians.

Social work journal editors want practitioners to publish. For example, one journal published by the National Association of Social Workers, makes a constant appeal to practitioners. To illustrate, in the Spring, 1987 issue, the following advertisement appeared:

> PREACH WHAT YOU PRACTICE
>
> Although *Social Work in Education* will continue to publish outstanding articles dealing with theory and research, the journal's Editorial Committee wants particularly to encourage school social workers--including new authors--to share their practice experiences with their colleagues. ("Preach,", 1987, p. 168)

Are there any rewards? Perhaps there is the professional satisfaction that comes with the feeling of "a job well done." The commitment and contribution to advancing professional knowledge on behalf of children, families, and communities may be sufficient rewards. Rarely practitioners may accrue direct financial rewards, though opportunities for advancement and leadership positions more typically reinforce the writer. One practitioner who reviewed an earlier version of this chapter suggested additional reasons for writing: "Publications do enhance the resume and image of practitioners. When an article is publishd it is presented to the Board of our agency. Publication is one way for practitioners to 'stand out'. It is also one of the most concrete ways to 'show' what you have done" (C. Struckman, personal communication, May 15, 1988).

## Obstacles to Publishing

There are considerably more obstacles to publishing and too few extrinsic rewards for the practitioner. Practitioner-publishers need to consider some organizational and personal obstacles and barriers that apply to many who seek to publish. When one is aware of the many obstacles that one is likely to encounter, it becomes easier to plan, prepare, and be ready for problem-solving.

### Recognizing and Challenging Organizational Barriers

Practitioners are rarely expected or encouraged to publish by their employers--school boards, special education cooperatives, area education agencies. It is important that organizational barriers be recognized and, where possible, removed. For example, state or local school authorities could offer competitive grant awards to school social workers who have developed a plan for research or professional writing. Such grants might include funding for clerical support, expenses, reduced work assignments, research consultation, and credit for inservice training (at least one Iowa Area Education Agency allows staff to attend conferences and inservice programs and receive a corresponding reduction in their work assignments). To the extent that there is organizational support for research and writing, personal barriers become less significant.

## Overcoming Rejection

Fear of rejection by journal editors may be a major roadblock for some who aspire to publish. The word "no" comes with the territory but so does the word "yes." Journals vary in their acceptance rate. Some journals may only accept one in ten submissions while others have higher acceptance rates. Expect and accept rejection notices but recognize that this does not mean failure; it does almost always suggest that additional work on the manuscript is needed.

## Making Time

One can expect to research and write on one's "own time", which may mean evenings, weekends, and summers. Setting aside time after a 40- to 50-hour week is often difficult. Summers and holidays are often the best time to plan new intervention programs or strategies for implementation the following school year or to write papers in final form for submission. Weekends can be used to do some writing and rewriting, library research, and reading. "Writing can [also] be done in snatches" (Penaskovic, 1985): while eating lunch, between meetings or interviews, early in the morning, or when there is a canceled appointment.

## Achieving Balance in Your Life

Personal and family life usually suffer. At the least the writer has less time to enjoy leisure time activities. The commitment to write calls for a realistic plan of action and a disciplined schedule in order to achieve research and writing goals.

Friends, family, and perhaps colleagues should be gently told about one's plans to embark on a "dangerous" course. They may see less of the aspiring writer and that person will not always be in good humor. More meals may be eaten out each week. A room will be set aside that is just for the writer (if you're lucky enough to have a room) and a No Trespassing sign can alert all family members to stay out. Few school social workers are fortunate enough to have their own office where they can work and have quiet time to think! Sometimes the whole project is just simply put in a box and dragged out periodically (and hopefully frequently) to be spread all over the kitchen table. The project can occupy much of one's thinking and conversation until friends and loved ones kindly let it be known that there are other things in life besides the "d--n" research or writing.

A major obstacle can be overcome by letting significant others know what one's plans are, how one will carry out the project, where one will think and write, and how one will manage one's life. Communication is a two-way process; negotiation and accomodation will be necessary! Healthy, positive communication with family members about the various chores and requirements for writing is a sure way to head off potential problems.

## Developing New Skills

Doing research and writing for publication requires re-learning what was taught in graduate schools of social work and, very often, learning new skills. Practitioner-scholars need to be expert in knowledge and intervention in their claimed area of practice. In addition, knowing how to conduct research is frequently another area of needed skill development.

## Out-of-Pocket Expenses

One can expect to be out-of-pocket for a variety of expenses depending on the type of research one conducts and the kind of writing one does. Possible expenses include developing a good library of professional books, subscribing to journals, attendng conferences, photocopying articles, having one's paper typed, and conducting computer searches. Sometimes it is possible to obtain a grant or receive support from one's school system to defray some expenses.

## Expect Frustration and Disappointment

If something can go wrong, it will. Clients sometimes miss appointments, meeting rooms are periodically unavailable, emergencies can occur and prevent one from doing some essential task, data may be lost, data collectors may not undertand how to observe or record, and the data collected may not be in a usable form. The list is endless. One should plan for one's efforts to go awry and to take longer than ever anticipated! With this in mind, the writer won't be too disappointed. And if things go right, one can be much happier about being "ahead of the game."

### Seek Criticism

Try to find friends and colleagues who are willing to apply "red ink" to "the masterpiece." It is useful to "park-your-ego" when sharing one's work with colleagues and subsequently reviewers. Look for those who know the subject matter and who have excellent writing skills. The author is typically thankful though perhaps slighty bruised.

### Be Alert

There are other challenges awaiting the writer. For example, school administrators, parents, and teachers may not allow the practitioner to conduct research (Wilson, 1985). Important documents, notes, data, or references may be misplaced, lost, or accidentally thrown away. Obstacles may differ from those suggested in this chapter; nevertheless, they all must be addressed and overcome.

### Managing Success

If the writer becomes a published author, one may find that not all one's colleagues are as enthusiastic as expected about one's accomplishment. The author may have become a "rate-buster" and exceeded the expectations for staff in a particular school district or area education agency. Many in the school will not know or care, while a few may be slightly envious. In time they will forgive and forget if the author allows them. Some will be proud of the writer's success.

## Finding Support

### Will You Solo or Coauthor?

The decision to coauthor is an important writing strategy ripe with opportunities but also risks and frustrations. One may decide that one is not ready to write alone--go solo--but that there is someone else who is willing to share in the struggle. Consider a coauthor.

Doing research and writing is a lonely and time-consuming effort. A coauthor may increase the chances of completing the paper. One can share the work and learn from the other while receiving support, understanding, and acceptance in the process. One author may also complement the other by bringing different areas of expertise and skills to the research and writing adventure. A good idea is to select a mentor, perhaps one who has previously done research and published. This person may contribute the know-how, which is a springboard for the practice-related research idea. Consider teaming with a colleague from another profession. Colleagues from psychology, counseling, special education, nursing, and school administration offer unique opportunities to bring the perspectives of two professions to important areas of research and publishing. This can also expand the possibilities for publishing in journals other than social work. Coauthors are not uncommon and should be considered if it will improve one's chance of success. In recent years between 33 and 40 percent of the articles published in _Social Work_, _Social Work in Education_, and the _School Social Work Journal_ were coauthored (McCullagh, in press).

There are also disadvantages to coauthoring a paper and conducting team research. Every advantage can become a disadvantage. The work may not be shared equally. One may be more talented than another. Finding time to get together, different styles of functioning, and agreement on what to do and when may all cause conflict, lack of support, and even the permanent loss of a friend.

Precautions help insure success. Find a coauthor or coauthers that complement and are compatible with each other. For example, to mention an obvious potential conflict, if one writer doesn't smoke and the other one lights up all the time, problems are likely to occur. Develop a written plan for division of labor. Decide on criteria for who will be the senior author. Usually the senior is the one who makes the major contribution to the project, including writing the article, but coauthors need to decide this important question (see, e.g., American Psychological Association, 1983; Winston, 1985).

Be honest with each other and communicate concerns as the needs arise. Many problems can be avoided if concerns are addressed quickly. Fox and Faver (1985) discuss intellectual and personal factors in selecting partners, management of the project, and interpersonal skills and personal characteristics critical to successful work.

### "Joint Work Program"

Valian (1985), an academic, after denial of tenure, started a work discussion group and then began a "joint work program" with a member of that group. She details the work program they developed to accomplish their work and especially their "many semicompleted projects" (p. 103). The work program consisted of five interrelated components: (1) "discussing work with an ally", (2) "keeping a work log", (3) "making a schedule", (4) working at least two hours a day, and (5) working on one project at a time (pp. 103-108).

Valian's personal example of a work program was created from a personal crisis to solve a problem in managing time and completing projects. Her experience may have application for school social workers. The Valian work program may be instructive for those with similar interests and needs who are committed to writing and publishing. Allies working together, supporting, monitoring, and expecting creative performance may be impetus to accomplish agreed-upon goals.

### Writing Support Groups

Related to the ally joint work program is a support group for writers. Young and Glenn (1987), Ostrowski and Bartel (1985), and Hood (1985) present models, guidelines, tasks, and benefits of effective support groups. Hood challenges the "Lone Scholar Myth." She notes that "even the most productive and well-established researchers and scholars need appreciation, enouragement, and nurturing. Simply being excellent is not enough" (p. 112). Mutual support groups should develop an agreed upon structure (when, where, and how often to meet), meeting focus or agenda, group tasks, and member goals.

Groups may focus on or address such issues as

> finding time to write..., balancing work and family responsibilities, getting started on a project that one has been avoiding, coping with manuscript rejections and negative reviews, seeking out criticism from experienced authors in one's professional network, setting reasonable goals for one's productivity, and letting go of a project one has been working on 'forever'. (Hood, 1985, pp. 117-118)

Support groups are appropriate for school social workers and may include other professionals such as psychologists, counselors, and educators.

## Conclusion

Practitioners are not often afforded the structural opportunities or resources that are provided to academics. Research contributions by practitioners are essential for the continued growth of the profession--to test, develop, and validate knowledge for school social work practice and to assess effectiveness of interventions and delivery of services. Overcoming organizational barriers, if possible, and obstacles unique to each writer is essential. Finding reasons for writing are critical. Ways to share the burden of writing are suggested.

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# A GUIDE TO PROFESSIONAL PUBLICATION FOR SCHOOL SOCIAL WORKERS

James G. McCullagh

ABSTRACT: This chapter addresses decision and action steps in selecting a journal for publication of one's work, highlights selected journals, and reviews manuscript evaluation. Other forms of publication are briefly reviewed to help practitioners choose the most appropriate vehicle for their written work.

The usual vehicles for professional communication include conference presentations, journal articles, books, and reports for school boards, governmental agencies, and foundations. One can also write articles for newspapers, professional and consumer newsletters, professional magazines, yearbooks, and encyclopedias. What form of publication is most appropriate for one's proposed study or written work? Publication outlet should be considered prior to writing and prior to conducting research in the schools or community.

## Journal Publication

A good starting point is to write a paper for journal publication. The chances of success are greater when compared to writing a book for scholarly, trade, or commercial publication. It is sometimes easier to write a book review, a short note for a newsletter, or a chapter in an edited book. The focus here, however, is to provide guidelines to write a paper for publication in a refereed journal.

Many opportunities exist for journal publication. At least three specialty school social work journals exist: Social Work in Education, School Social Work Journal, Iowa School Social Work Journal, and a journal for pupil personnel workers: The Journal of The International Association of Pupil Personnel Workers. Other social work journals that occasionally publish articles pertaining to school social work are Social Work, Social Service Review, and Social Casework: The Journal of Contemporary Social Work. Numerous other journals in social work, related disciplines (e.g., psychology, sociology), and professions (e.g., special education, school psychology, counseling) may also be considered for publication.

## Selecting a Journal: Decision Steps

Identifying the Proposed Audience. Target the audience--the intended readers. Who ideally can benefit from reading the paper? Imagine that a specific person in the targeted audience is reading the paper. Write the paper for that person. Be aware of their needs--new knowledge, practice skills and techniques, applications of behavioral and social science theory, applications of models of practice--and one's own goals. One must find a match between one's own goals and audience needs.

Target readers could be school social workers, social workers without regard to specialty, social workers in another specialty (e.g., child welfare workers), related service providers (e.g., psychologists), university faculty, school teachers in regular or special education, parents of children with handicapping conditions, students with special needs, school administrators (e.g., building principals), school boards, decision makers at the community, state, or national level, or the general public. In addition, one may also target minorities, women or men, or a specific educational level--preschool, elementary, junior, or senior.

Determine the Necessary Qualifications. Does one have the necessary methodological, statistical, or theoretical knowledge or professional practice experience to write for the intended audience and selected journal? Does the writer need consultation, technical assistance, or a coauthor? Should the project be modified or perhaps delayed until one can obtain the needed expertise or knowledge or have access to resource assistance?

Review the Genres of Writing. Journals vary in the type of paper they accept for publication. For example, Social Service Review gives priority to "research-based articles dealing with subjects central to social welfare research, practice, education, policy, and history" (Mendelsohn, 1987, p. 131). Social Work, "the most prominent voice of the profession" (Meyer, 1983, p. 3), offers "readers a balance among practice, policy, and research interests; an equitable distribution among fields of practice; and a spread in focus among processes, problem areas, hard data, philosophy, and politics" (p. 3). The Editorial Board of Research of the journal Social Work Research & Abstracts

> is particularly interested in manuscripts that relate to social work technology, research strategies and methods of research as applied to problems faced by social workers, theoretical articles that have relevance to social work research activities, and analytical reviews of research. (NASW, 1985a, p. 10)

One must classify the kind of paper one plans to write. Is the intent to conduct an empirical study, write a book review or a review essay, or compile a bibliography perhaps with annotations? Is the work an historical or biographical paper? Carol R. Meyer, Editor-in-Chief of Social Work, comments that articles "may be descriptive and informational, analytical, empirical, theoretical, historical, or philosophical" (1983, p. 3). She continues:

> Even so, empirical and analytical articles are more relevant and generalizable than are purely descriptive articles in that they stimulate readers to apply what they have learned in the articles to their own thinking and practice. (p. 3)

Consider the Length of the Paper. Journals typically publish full-length papers, usually from 14 to 16 double-spaced, typewritten pages, but some journals will accept longer and also shorter papers. Short papers (1,000 - 1,500 words) are titled, for example, "Briefly Stated," "Practice Notes," "Research Notes," and "Research Briefs." Does the writer need to write a full-length article or can a brief report suffice? One may increase one's changes of success if one writes a shorter paper that meets journal guidelines.

Assess Rejection Tolerance. One is best advised to decide one's tolerance for rejection and desire for fame. Typically, the more prestigious the journal, the higher the rejection rate of submitted papers. A few journals are often referred to as the "major, national social work journals." Publication in a "biggie" is usually accorded more status and prestige than appearing in print in a "lesser" journal, but this involves greater risk of rejection.

The acceptance rate of selected journals, as reported by Mendelsohn (1987), follows: Social Work, 14%; Social Work Research & Abstracts, 25%; Social Service Review; 30%; Child and Adolescent Social Work Journal, 40%; Clinical Social Work Journal, 40%; School Social Work Journal, 50%; and, Journal for Specialists in Group Work, "67% with 2 revisions" (p. 72).

The editors of the Journal of Sociology and Social Welfare report an acceptance rate of between 40% and 50% but also "try to provide suggestions for revision or resubmission rather than rejecting amanuscript outright. Most articles go through at least one revision. On occasion, members of the editorial board volunteer to work directly with the author on revisions" (Mendelsohn, 1987, p. 105).

An important but related issue is the length of time that journal editors take to accept or reject submitted papers and then to publish (Manniro, 1983; Stoesz, 1986). If the journal of first choice rejects one's paper will one's ideas, database, or conclusions become outdated? Will subsequent reviewers reject the paper for lack of timeliness.

## Selecting a Journal: Action Steps

Target Professional Journals. Countless journals exist that may be appropriate for submission of one's work. Targeting journals can be fun but also difficult, especially if one is a first-time author, writing in a new area, or seeking different journal outlets. Remember that the first task is to identify a number of journals that publish articles similar or related to the type of research or writing that one plans to do. Do one or all of the following:

1. Scan personally favorite, most useful, or enjoyable journals.
2. Review the school social work journals highlighted in this chapter. They may represent the best source for papers that address issues of interest to school social workers.
3. Review Mendelsohn's (1987) An Author's Guide to Social Work Journals. It contains relevant publishing information such as editorial focus, acceptance rate, review and publication lag time for more than 60 journals.
4. Review recent issues of Social Work Research & Abstracts. The Journal includes abstracts of articles previously published in more than 175 journals of interest to the social work profession. Abstracts are

categorized by "Fields of Service" including "Schools," "Social Policy and Action," "Service Methods," "The Profession," "History," and "Related Fields of Knowledge." Scan categories of interest and especially "Schools." One should note the journals that publish in one's interest area.

5. Review the Reference or Bibliography listings of the literature that have been obtained. Note the journals that are referenced.

6. Review the American Psychological Association (APA) Publication Manual (1983, pp. 173-178) for a listing of APA approved journals.

7. Review the following sources for journals in education: Cabell (1984), Collins (1988), Levin (1983), and Manera and Wright (1982).

8. Numerous abstracts and indices that may relate to one's interest area should be reviewed. Scan the relevant sources and note journals indexed or abstracted that pertain to the topic.

Select the Most Promising Journals for Review. It is helpful to visit a university library and review the journals that have been identified (perhaps between 10 and 20) as falling within one's area of interest. In addition, one may wish to skim other journals in social work, education, psychology, home economics, sociology, and other fields and disciplines. A major university library will maintain a collection of hundreds of journals related to the social and behavioral sciences and the helping professions. Some universities also have a number of specialty libraries (e.g., health sciences, education, social work, psychology) that may have to be visited. Even a cursory review of current journals cannot be done in a morning. One must be selective. Start with identified journals. Scanning journals can be overwhelming and should be done over a period of time.

Sort the reviewed journals into three categories: probable, possible, and unlikely. For a variety of reasons some journals will not be appropriate. Perhaps journals are too statistically oriented, methodologically too sophisticated, review unfamiliar literature, address an audience other than one's targeted group, represent a discipline or profession not shared by an author or coauthor, or is a publication which specifically invites authors to submit papers.

Recent issues of "Probable" journals should be reviewed with the specific goal of selecting three journals that appear appropriate for one's topic and represent one's "best chance" for getting a paper accepted (consistent with decisions previously made--e.g., one's tolerance for rejection versus a journal's rejection rate). One should read the journal's editorial policy and guidelines for submission. One should become comfortable with the variety of articles published. Recommended length of articles, types of papers most often accepted, and topics that are covered then can be determined.

Choose the "Best Bets". One should narrow the list of journals to the top three and rank order them for submission. One might write for the first journal on the list. If warranted, a query letter may be written (see Dorn, 1980b). Journal guidelines must be followed, using the appropriate style guide. Most social work journals require authors to follow The Chicago Manual of Style (1982), though some use the Publication Manual of the American Psychological Association (1983). It helps to skim articles and then study those that appear to have a format similar to one's proposed article.

Submit the Paper to a Journal. A paper can be submitted to only one journal at a time for review. If the paper is not accepted, the reviewer will often send the author comments that can be helpful for revision and then submission to another journal. If a paper is not accepted, one should not give up. With additional work the paper may be appropriate for another journal. Sometimes papers are accepted conditionally, pending changes as suggested by the editor. The process can be frustrating, discouraging, and time consuming. Rewriting the paper to satisfy journal editors may appear overwhelming and perhaps cannot be done without making major changes. Only the author can decide if the effort is worth the reward--to see one's name in print and one's talents acknowledged.

## Selected Journals Highlighted

Four journals that represent primary sources for literature relating to school social work will be highlighted. They should be seriously considered if one's target audience is school social workers, if one is a first-time author, if one's paper is practice focused, and if one is looking for a decent acceptance rate.

Social Work in Education. The journal, published quarterly since 1978, by the National Association of Social Workers, publishes full-length articles (14 to 16 typewritten pages), Practice Notes, Trends and Issues papers, and an average of two book reviews each issue. The journal focuses on

> practice and theoretical developments in the field of social work service in elementary and secondary education. It includes an emphasis on evaluation and accountability as well as on the implications of law and policy.
>
> Manuscripts are welcome that address general or specific matters involving social work and education, including descriptions of practice, innovation, research, legislation, policy, and planning. (NASW, 1985a, pp. 11-12)

See Information for Authors About NASW Publications (NASW, 1985a) for further details regarding policies for Social Work in Education, and also Social Work, and Social Work Research & Abstracts.

The current Editor-in-Chief, Robert T. Constable, in a recent editorial on "Building the Literature in School Social Work," commented on the review process:

> Social Work in Education reviews about 60 articles a year and publishes 20.... Although both authors and readers often believe that writers whose manuscripts get published are well connected or have some magic touch, the reality is quite different. The reviews are completely blind; if a reviewer has an inkling of the identity of the author, he or she declines review of the manuscript. About half of the manuscripts have been accepted only after some revision. (1987, p. 206)

School Social Work Journal. The journal has been published twice yearly by the Illinois Association of School Social Workers since 1976. The editor, Kathleen J. Moroz, in a recent editorial outlined important objectives for the Journal:

> We especially want to encourage new and beginning writers to develop their ideas and encourage them to get their ideas in writing.... [The] Journal will publish articles primarily aimed at improving social work services in the public schools....
>
> In addition to full-length articles, the journal would like to establish a new department, "Brief Reports," for shorter pieces related to new innovations in school social work practice; current legislative and policy concerns affecting social work in the schools; and trends in social work practice, licensure, or social work education that related to school social work, as well as news about school social work from other states and state associations. (Moroz, 1987, p.45)

Iowa Journal of School Social Work. The Iowa School Social Workers' Association in 1986 launched the Iowa Journal of School Social Work. Also published twice yearly, the Journal is "dedicated to extending knowledge and improving practice of social work in educational settings." The editor, Sallie C. Verrette, a school social worker, is seeking manuscripts from the "many 'out there' with either ideas for articles that you haven't gotten around to writing or with articles written for which you haven't yet found a publisher" (1987, p. ii).

IAPPW Journal. Published quarterly by the International Association of Pupil Personnel Workers (IAPPW) since 1956 (and earlier as a Newsletter), the IAPPW Journal "provides information and research findings relating to school attendance and other topics and issues that impact on children, youth, and families" ("Editorial," 1987). In the Winter issue, 1987, the Journal's editorial staff urged its readers to "share information about innovative programs, legislative initiatives, and educational reform" (1987, p. 306). Manuscript guidelines may be found on the inside back cover of each issue or one may write the current editor: Janice A. Chmela, P.O. Box 32028, Chicago, Illinois 60632-2028.

## Manuscript Evaluation

Manuscripts submitted to most professional journals undergo peer review. The review is "blind," that is, the reviewers do not know the author's identity nor does the author know who is reviewing the paper. Typically, two or three readers (reviewers or consulting editors)--more in cases of split recommendations--review each submitted paper. For example, papers submitted to Social Casework are "reviewed by at least three Editorial Advisory Committee members and perhaps by other authorities in the manuscript's topic area" (Burant, 1988, p. 57). Recommendations are forwarded to the editor or editor-in-chief who makes the final decision. The review process varies, taking between two to six months from the time a paper is submitted to the time the author is notified.

Journals also vary in the criteria used to determine the publishability of manuscripts. Journals often indicate general criteria either in a journal article or in a separate publication. For example, the

National Association of Social Workers has published Information for Authors About NASW Publications (1985a), which is available upon request. The editor of Social Casework, Ralph J. Burant, stated the criteria employed to evaluate manuscripts: "Style and readability, relevance, evidence of scholarship and expertise in social work theory and practice, and values" (1988, p. 57).

If one knows the criteria that reviewers consider when evaluating manuscripts, one can be guided by such criteria and become one's own critic first. The criteria or factors for evaluating manuscripts that consulting editors for Social Work in Education use, as revised by the Journal's Editorial Committee (NASW, 1985b), is presented:

> 1. Reviewers should be aware that good writing alone can be misleading and can veil flaws in content and conception.
>
> 2. An article should have application to practice.
>
> 3. The dates of references are important in determining the value of an article; therefore, an article should have an adequate "reference trail."
>
> 4. Research articles should include some method of evaluating outcomes.
>
> 5. In research articles, reviewers should check statistics and arithmetic.
>
> 6. The reviewer should determine if the author clearly stated the purpose and maintained a focus in the article consistent with this purpose.
>
> 7. Excessive length alone is not grounds for rejection of an article; reviewers can ask authors to cut or can suggest specific cuts. (p. 3)

Earlier criteria enunciated by Lela Costin (NASW, 1982b), then Editor-in-Chief of Social Work in Education, still appear to be relevant:

> 1. Do not give too much credence to statements and claims made in the author's abstract; authors do not always accomplish what they set out to accomplish.
>
> 2. A strong opening is a good sign. If the first few pages of an article are rambling and confused, it is unlikely that the balance of the article will be well written.

> 3. Loose organization is a serious problem because--unlike problems such as missing data and awkward phrasing--it is seldom easily remedied.
>
> 4. Data-based research articles must follow sound statistical procedures....
>
> 5. In research articles, authors must not merely present the data but must interpret it.
>
> 6. A research article may be valid even if its data are not conclusive. The author must, however, qualify his or her conclusions appropriately.
>
> 7. Try to develop a consistent individual attitude in rating manuscripts and do not be too concerned if your ratings do not always agree with those of other reviewers. Do not let an interesting topic sway your judgment concerning the quality of the writing.
>
> 8. Reference lists must support the text adequately. A source must be cited for every quotation. Be on the alert for the use of secondary sources, which are unacceptable. Except in the case of surveys of the literature, long reference lists should be examined suspiciously as a possible indication of unoriginality--particularly when a few sources are repeatedly cited. (p. 4)

For other recent discussions on the manuscript evaluation process see Gambrill (1985), Editor-in-Chief of the Editorial Board of Research of *Social Work Research & Abstracts*. Regarding *Social Work*, see discussions by Meyer (1983) and Gottlieb and Berger (1984).[1]

## Other Publication Outlets

### Book Review Writing

Writing book reviews presents another opportunity for journal publishing. Numerous social work journals publish reviews and editors need book reviewers. However, "faculty primarily publish reviews in such journals as *Social Work*, *Social Service Review*, *Social Casework*, *Social Work in Groups*, and *Administration in Social Work*" (McCullagh, in press). Most reviewers for the *School Social Work Journal* are "practitioners from Illinois," and for *Social Work in Education* they are "often Consulting Editors or members of the Editorial Board" (McCullagh, in press).

A letter to the editor or the book review editor outlining one's qualifications and one's specific areas of expertise and interest may result in opportunities for review (see, for example, Verrette, 1986 and Hopps & Demone, 1988). If one is chosen, journal editors will provide guidelines, but one may also profit by reading the following: Dorn (1980a), Kamerman (1978), and Wolper (1985).

## ERIC Documentation

The Educational Resources Information Center (ERIC) system currently sponsors 16 subject-oriented clearinghouses (see inside back cover of a recent issue of Resources in Education). These clearinghouses acquire, select, catalog, abstract, and index accepted documents. One should submit one's paper or report to the clearinghouse most appropriate to one's topic or, if in doubt, to the ERIC Processing and Reference Facility. ERIC is particularly interested in unpublished documents dealing with "education or its aspects" such as technical reports, program or project descriptions, evaluation studies, manuals, conference papers, and proceedings. If one's work is accepted, one will be notified and then sent a copy of the microfiche containing one's document. It will be given an identification number (e.g., ED 123 456) and an abstract will appear in a subsequent issue of Resources in Education. ERIC documents are an excellent resource for a variety of reports and papers that are not appropriate for journals.

## Making Conference Presentations

Writing abstracts for conference submission is also another excellent way to break into the publishing game or, at least, to begin the competitive process of being recognized. Often conference planners will select a theme and solicit papers by issuing a Call for Papers that address the chosen theme, although a variety of proposals usually are accepted. Abstracts from 100 to 1,000 words, usually following a specific format, are reviewed anonymously.

School social workers can submit abstracts to conferences held at the state, regional, and national levels. The Midwest School Social Work Council holds an annual conference. In 1987 the twentieth conference was held in Des Moines and the twenty-first was held in Louisville in the fall, 1988. The International Association of Pupil Personnel Workers also sponsors an annual conference. The conference theme in 1988 was "Transmitting Success Through School Attendance".

In addition to the many state conferences sponsored by the state chapters of the National Association of Social Workers (NASW) and state school social work associations (approximately 22), NASW sponsors a national conference that brings together concurrent specialty conferences. In November, 1988, the School Social Work Conference was held in Philadelphia.

Conference planners typically want presenters who can offer a workshop--one to two hours--on timely topics of high interest to practitioners. Workshops that focus on skill development for experienced practitioners are eagerly sought. Sometimes papers will be selected for inclusion in a book on proceedings of the conference. NASW, for example, has published papers from recent national conferences on school social work (Hawkins, 1986; NASW, 1982a).

### Book Publishing

One can author, coauthor, or edit a professional book. The book could be published by a university press, a trade publisher specializing in professional books, a vanity press, federal and state government agencies, or professional organizations such as NASW. Books pertaining to school social work have been published since the 1920s. The United States Department of Health and Human Services and the Department of Education, state departments of education, and other state departments have been excellent sources for publication. Governmental agencies usually underwrite costs related to printing and distribution. In recent years there has been a decided increase in publications relating to school social work.

Book publishers try not to lose money on the venture, hence they need to know that there is a market of persons who will buy the book. Textbooks and scholarly works that appeal to professional practitioners are usually excellent risks for publishers. The market often can be identified and the financial risk minimized. Edited books offer opportunities for practitioners to publish. For example, the Iowa Department of Education recently published *School Social Work Interventions with Behaviorally Disordered Children: Practical Applications of Theory* (McCullagh & McCullagh, 1987). Most of the 21 chapters were written by practitioners!

NASW, a major publisher of social work books, including school social work, has developed a statement on "policies and procedures for books" (1985a) that prospective authors should review prior to taking on the major task of writing a book. Other publishers that one may wish to target can provide similar information. For those who plan to write a book, numerous sources for help exist: Alberti (1985), Applebaum and Evans (1982), Belkin (1984), Brock (1985), Fischel (1984), Freeman (1985), Larsen (1985), Luey (1987), Mullins (1977), Persell (1985), Powell (1985), Poynter and Bingham (1987), Topkis (1985), and Van Til (1986).

## Conclusion

Writing for publication is an important vehicle for dissemination and communication of knowledge building and practice wisdom. Publication of journal articles and other forms of written communication is both an opportunity and a professional responsibility but also demanding and time-consuming. Submitting one's work for publication involves the risk of rejection, but by using the sources found in this handbook and following the suggestions offered, publishing opportunities will be increased.

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## Footnote

[1] For further views of some Editorial Board members of Social Work and a lively discussion of selected aspects of the Board's role first see Beaver, Gottlieb, and Rosenblatt (1983), then Hagen (1983), Mannino (1983), McQuaide (1983, and Martinez-Brawley (1984). Follow with replies by Beaver and Gottlieb (1984) and Rosenblatt (1984).

# THE PROCESS OF WRITING JOURNAL ARTICLES:

# A PERSONAL STATEMENT

James G. McCullagh

ABSTRACT: The author shares his approach to writing papers for journals. Steps include getting started, selecting and developing topics, finding ideas, and choosing specific purposes. Topic folders and keeping a journal are two strategies to organize the creative process. The personal aspects of writing, from ways to begin to endings, are explored. Guides to mechanics and style are suggested.

Researching and writing have been part of my working life since the early 1970s when I first believed that I could publish. I did not have the writing skills nor any awareness of how to break into print, but I did have some ideas that I thought were worthy of publication. I was a school social worker while also taking evening and summer courses that would eventually lead to a doctorate in education. I began to couple papers I was writing for courses with actual practice in a junior high school. The school psychologist assigned to the junior high where I worked had already published a few articles. I shared my ideas with him and the possibility of collaboration. We published four co-authored articles.

## Topic Selection

How does one start? Belief in oneself and commitment to the kind of process of research and writing that leads to professional publication are essential. A constellation of factors will lead to one's topic and to ideas for publication. Practice as a school social worker coupled with one's personal inclinations and background, formal and informal education, and other factors suggested below will lead in one direction more than another. The topic chosen should be personally and professionally important and rewarding to the writer. One may have an interest in school phobia, adolescent suicide, transitioning from high school to the world of work, parenting strategies, teaming, or an array of personally successful interventions. How can one get started with topics that have strong personal interest? Consider the following factors.

## Finding Ideas

Where does one find ideas to write about? First, writing is not a mystical realm open only to the chosen few! Second, one does not need a great idea, a once-in-a-lifetime inspiration, or something that will revolutionize the practice or the lives of school social workers (but wouldn't it be great to write a seminal work). A review of related professional literature may suggest that most articles add (at best) just a little to our understanding of some phenomenon.

Sources for ideas are unlimited: journal, magazine, and newspaper articles; chance encounters; attendance at team meetings and staffings; contacts with children and parents; writing and reading social histories; discussions with teachers, support staff, and administrators. Be alert to personal feelings and thoughts. Begin to "experience" professional life from a reframed point of view--to research and to publish.

## Current or Past Practice

What one does in one's practice as a school social worker represents the best source for topics and ultimately ideas for research and publication. Write about the new, unexpected, unique, special, true; what you do best; unanswered questions for which you have answers; what has not been done before or quite the way you are doing it, or with a slightly different group; and what yet needs to be done. Have you developed strategies, interventions, techniques that work with specific individuals, groups, families? Write about a successful intervention applied to a different setting or population. If it works with adolescents (adults, children, males, females), can it be applied to another population or ethnic group? If it works in a small group, can it be applied to a classroom situation?

## Personal factors

The "private troubles" that we directly or indirectly experience may be important "public issues" to be explored. Our family of origin, current family, self, friends, or neighbors may have had experiences with substance abuse, unexpected death, poverty, violence, delinquency, mental disabilities, and numerous other challenges. Exposure to and interaction with these "private troubles" may be a motivating factor to do further exploration.

## Workshops

Do you give workshops on your favorite topic? Next time tape your workshop! Combine your professional expertise, knowledge of the literature, handouts, presentation (now audiotaped and transcribed), and participant feedback, and you may already have the material for a first draft! Review your handouts; they can suggest a tentative outline of your paper.

## Conference Presentations

Speakers often are expected to have written an abstract and then a paper to be summarized and highlighted at a conference presentation. That paper or perhaps a detailed outline (contained on 3X5 or 5X8 cards) may need just a few rewritings to be ready for publication. NASW, for example, encourages presenters to submit their final papers for publication in one of their four journals. Indeed, NASW (1988, p. 1) "holds the right of first publication on material presented at its conference until one year after the close of the conference. This means that, if you intend to have your paper considered for publication within that period, you must submit it to NASW first".

## Graduate Papers

Consider recycling your thesis, term papers, research projects, and reports. We all wrote many papers in graduate school and completed a major paper, project, or thesis. Some have been turned into journal articles or reworked considerably to become doctoral dissertations! Consider your legacy of writing. Was there a paper you thought valuable that could be refocused or restructured? Modified and updated papers usually will require an additional literature review and may be enhanced by your current practice knowledge and skills. You now also may have a wealth of experience with a variety of clients and systems that could be incorporated into the revised paper. Perhaps a graduate paper could present a new beginning, a starting point for additional study and writing. Examine your graduate work; a diamond-in-the-rough may be waiting for you.

## Community and Professional Service

As a member of a professional, consumer, advocacy, or community organization you may be involved in developing new and innovative programs, creating new alliances that lead to solutions to important social problems, or writing issue or position papers. The unique work that you and others in your organization have done may suggest opportunities for publishing. Some years ago I was a board member of an adoptive parent group in Kentucky. An opportunity occurred that allowed me to mount a campaign to influence state legislators and ultimately state government human services leadership to make special needs adoption a high priority. The effort succeeded and an article detailing the case advocacy approach was written (McCullagh, 1981).

## Developing Topics

An author needs to know his or her topic very well. One must begin or continue reading relevant literature, examine one's practice and perhaps the practice of others, and to think and reflect on personal experiences. Creating a Topic Folder and maintaining a Journal are two tools for organizing personal experiences with chosen topics.

### Topic Folder

The Topic Folder becomes a storage bin for specific topics (e.g., school phobia). Begin collecting everything that relates to that topic. The folder may include copies of journal articles, ERIC documents, handouts and notes from conferences and workshops attended, newspaper and magazine clippings, and book citations. As the information collection increases one may want to differentiate a general topic into subtopics, thereby setting up two or more sets of file folders. Perhaps the first set will consist of intervention strategies for school phobia, while another set will include factors contributing to phobia. One folder may contain only copies of articles. Another folder may consist of practice documents (reports, social histories, notes). Folder creation and maintenance is one way of organizing ideas.

### Journal

A journal can be used to jot down interesting ideas, experiences, feelings, and notes from literature reading. The journal then presents an opportunity for one to chronicle one's reflections and interactions, both personal and professional experiences. C. Wright Mills, author of The Sociological Imagination, and a journal user suggested that a journal

> encourages you to capture "fringe-thoughts": various ideas which may be products of everyday life, snatches of conversation overheard in the street, or, for that matter, dreams. Once noted, these may lead to more systematic thinking, as well as lend intellectual relevance to more directed experience. (1959, p. 196)

As a source for entries, the journal can be used at anytime. Periodically one should read what is contained in the Topic Folder. Review jottings, notes, and ideas. As one reads, one should engage in dialogue. Question, ask, ponder, relate what is read to what is already known and understood. To some extent this is like putting a puzzle together. The writer-detective is looking for missing pieces. Ideas that are generated from this "interaction" with oneself also should be written down in the journal. Use the journal to write--to maintain a flow, a readiness, an awareness that writing is not so hard.

Be ready! An inspiration may come at any time. Be inquisitive. Ideas will come as you involve yourself with your topic. They will also come when you least expect ideas to flow--but your mind is always at work. I keep a handful of 3X5 sheets nearby to capture ideas. Later they are rewritten, and perhaps expanded and further developed, in my journal. I also use my journal to write action plans, library work to do, literature to read, and work to do.

Ideas flow when I have been or plan to work on a project or paper. Ideas, impressions, half-formed thoughts, questions, literature to read or re-read, titles, purpose statements, approaches to consider, and numerous other aspects of the project have come at almost any time--when I'm taking a shower, walking, going to and getting up from bed, while I'm reading, when I am talking to my wife or a colleague, while I am watching television, when I am teaching or sitting in my office, and especially when I have been actively working on the project. Often those ideas are valuable and can be incorporated at some point somewhere.

## Searching the Literature

I almost always do a thorough literature review. A partial review often precedes the selection of a theme and continues throughout the refinement process. I do on-line searching of a variety of databases, use indexes and abstracts, scan journals that are likely to publish in my area of interest, browse among the library shelves, and, when necessary, interlibrary loan or buy relevant documents. Reading related literature is also an excellent source for ideas that should be explored. The literature review may lend support to the validity of your idea or suggest a new or different direction to take.

### Fermenting

Then comes a time of ferment--a catalytic growth of purpose and specificity from the stewing of the enzyme contents in the topic folders and journal notes. Activities include literature reading, analyzing one's practice, reviewing prior research, note taking, journal writing, interacting with documents and notes, and thinking--seeking out that which has not been done or thought about before. Writers who ignore this essential process--which may take various forms--usually end up with work that is shallow in some respect, or at the least, not well written or well organized. One must allow time for this fermentation and growth to occur.

### Choosing the Purpose

Inspiration comes; a theme or purpose for a paper or study is found. Very often this is the life thread of a work and eventually ties a paper together as a unified whole by means of a few strategically placed thematic sentences. This time is always exciting but must be tempered with caution. There is a tentativeness to the discovery. It must be examined, explored, studied, considered, tested. Is the project feasible? Time, cost, available resources, talent, and knowledge are considered. How important is it compared to other projects? How does it fit with other priorities?

Case Example. In recent years I have become very interested in gaining bibliographic control of the literature pertaining to school social work. This interest, in part, developed out of a need to understand the history of the visiting teacher/school social work movement and the history of the National Association of School Social Workers. I became interested in school social work history when I began teaching courses on social welfare history and social services and social work.

Fisher (1979, 1981) has already compiled much of the school social work literature. I discovered, as I began collecting literature, that copies of the Bulletin of the National Association of School Social Workers, published between 1924 and 1955, were found in few libraries. Fisher (1979, 1981) had not been able to obtain the complete collection to include in his compilations. I thought a bibliography of the Bulletin would fill a gap or unmet need (McCullagh, 1986, 1987b, 1988). Similarly, a bibliography of doctoral dissertations pertaining to school social work was completed to fill another gap in the literature (McCullagh, 1987a).

Both projects were time consuming and expensive. I had never thought that I would write either paper. When the ideas came to me, I asked a number of questions: Could I obtain all issues of the Bulletin? How could I locate and eventually obtain over 100 dissertations? Would anyone be interested? Would these papers be published? Was I willing to devote the time and effort and pay the necessary expenses? Could such efforts serve other purposes for me? There was potential for at least two and perhaps additional publications. I now envision one or two more specialized bibliographies, a history of the Association, and critical literature reviews. As I write I learn more about that subject.

Ask similar questions. Will one's specific idea be worth the effort, time, expense? Will the work to complete a paper have application to other professional activities such as enhancing one's own practice or conducting workshops? Perhaps one can generate related ideas that may be worthy of study, research, and additional publications.

## WRITING: BEGINNINGS, MUDDLING THROUGH, ENDINGS

The articles and books that we read are often the result of many revisions by the author and critical readings by colleagues and editors. Writing is rewriting, revising, reorganizing many times--but that is a private activity. Only the final product is seen. There are many ways to begin, even when one is not exactly sure what is going to be written. In fact until it is written we don't know exactly what will be said.

### Beginnings

A major idea or purpose begins to evolve after one has thought deeply about one's topic. One may have ideas swirling around in one's head and still remain uncertain of the direction to take. As suggested in the previous chapter, already a number of journals have been scanned, one to three journals have been selected for submitting the article, the length of the paper has been decided, and many articles have been reviewed not only for content but for structure--that is, the parts (headings and subheadings). You are now ready to write. Remember there are as many ways to start and finish a paper as there are writers. Techniques that I use to focus my thoughts and begin writing are detailed below.

Brainstorming Titles. Generate a list of working titles. The list will probably be similar to the chosen topics, reflect personal concerns and experiences as a school social worker, highlight important ideas or themes, and suggest the primary and secondary purposes of a proposed paper. Now, after reviewing this list of titles, group similar ideas or themes. This process may suggest questions, additional titles, and new ideas. Write all the titles, ideas, purposes, and questions in your journal. Select two or three primary purpose statements for further development. You may be ready to begin writing at this point.

During the 1987-1988 school year I worked one day each week as a school social worker in preschool for an Iowa Area Education Agency. It was exciting to be back after a 10-year absence. I can also better appreciate what school social workers now do, as compared to my earlier school social work practice, which occurred prior to the implementation of P.L. 94-142.

I generated the following working titles or possible articles based on my recent experience. This list reflects my awareness of some current concerns and practices of school social workers. The themes (as suggested by the titles) could, with considerable work, eventually lead to papers. Choices must be made regarding which themes to develop. A variety of factors require consideration: author's interest, time, importance of theme, likelihood of getting published, and relative importance to other projects currently being considered.

Use of Forms in the AEA: Needed, Useful, Helpful? or Use of Forms in the AEA: Do They Detract from Service Delivery?

Teaming: Joys and Conflicts or Teamwork: Spreading the Work Around

Decision-Making at Evaluations: What say the School Social Worker?

Social Histories: Are Social Workers Ready for Automation?

Reduction of Acting-Out Behavior in the Classroom: An Application of a Multiple Baseline Design

Group Work with Adolescents with Behavioral Disorders

Parent Education with Mothers (Parents) of Preschool Children

Consultation Strategies and Techniques That Work with the Classroom Teacher!

Writing Purpose Statements. Most journal articles include a statement of purpose. Sometimes the statement is included in the journal abstract. More often the purpose of the article is found in the paper's second or third paragraph after the author has presented necessary background or rationale. Select one topic, again review your folders and journal, and then begin to write purpose statements. Just complete the following sentence: "The purpose of this paper is to . . . ." Write as many as you can. Don't censor yourself. This brainstorming process may take from 10 minutes to an hour. The best statements may come an hour or days and weeks later. Don't worry; this is a start. Brainstorming working titles can also lead to purpose statements.

A listing of recent purpose statements from a few journals follow. Note similarity to titles included in the Reference list. These purpose statements tell the reader what to expect. They also are a guide for the author, for the purpose statement and title should accurately reflect the content of the paper.

> This article presents a discussion of the laws which have relevance to the discipline and control of behavior disordered students in public schools. (Schrage, 1986, p. 64)
>
> This paper delineates the characteristics of school phobia, contrasts psychodynamic and behavioral approaches to the etiology and intervention of the disorder, and illustrates specific behavioral interventions based on behavioral assessment findings. (Thyer & Sowers-Hoag, 1986, p. 86)
>
> This article proposes that a specially designed systemic approach is necessary to treat children's behavior problems at

> school and presents a model treatment program--the Special Education and Treatment (SET) Program--and its theoretical underpinnings". (Dicocco, Chalfin, & Olson, 1987, p. 209)
>
> This paper examines and describes three critical roles in school social work practice with retarded children: 1) intervention with parents and family; 2) consultation and education with key school personnel, and; 3) community development and education. (Monfils, 1986, p. 31)

"I plan to write about . . .". Finish the sentence. Write as many sentences as possible but don't rush it. Review what you have written. Look for the main themes or ideas. Make an outline of these points. Write some more using each idea as a starting point. Continue this process until you begin to see the paper taking shape.

Creating Outlines. I consider my outlines to be tentative--a first approximation. Identify the main points you wish to make. Then list the ideas that support each point. Continue this process until you have exhausted the possibilities. If you are conducting a research study then you should review a style manual such as the APA Publication Manual (1983) for the "Parts of a Manuscript." Reports of empirical studies tend to follow a more or less standard outline. See Carver (1984) for guidelines and examples of writing research studies.

Outlines may range from the completely developed to a partial outline consisting of some to all of the main points to be covered. For example, a partial outline for this chapter was written in about an hour. Subsequent mini-outlines were an outgrowth of thinking, reading, and reflection. Outlines may be used at any time. After you have written one or more sections of the paper, new ideas will be generated. Outlines can be written for these new sections.

Free Writing. Find a quiet place and begin to write whatever comes to mind. Don't censor, rewrite, correct misspellings, or correct bad grammar. Just write for as long as you can. Perhaps you will write for five minutes or an hour or longer. Maybe you will write in spurts but the main point is to keep writing. Then put it aside. Return after an hour or day and read what you have written. Look for main themes and arguments to support your themes. Look for ways to organize what you have written. Take each idea and write it on a file card or sheet of paper. Group your ideas. Look for ideas that go together, that seem to fit. Play with the ideas by rearranging them a number of times until you have a fit. Keep extra cards or sheets of paper available. New ideas will emerge and should be written down. When you are finished you will have a working outline from which you can begin writing again.

Writing in Blocks. Choose a section of your proposed paper--any section from the easiest to the hardest - and begin writing. Perhaps it is the literature review or a component of the methods section or a write up of an interesting group meeting. Sometimes writing the conclusion gives one some fairly good ideas of what to write about. Just continue to write sections until you have a sense of the paper's organization.

Combining Approaches. I use all of these approaches for almost every paper. While writing I may generate additional ideas and create new headings and sub-headings. New ideas also come from reading and rereading a range of literature, from professional and personal experiences, and from dialogue with colleagues. Writing is a creative process. The act of writing will spur you to new ideas that may be examined for inclusion in the paper. Each new idea may be developed using any of the approaches previously mentioned. Writing strategies or procedures to help authors to write are plentiful. To examine a potpourri of strategies review the following sources: Barzun (1986), Becker (1986), Belkin (1984), Bradbury (1980), Cappeto and Kauffman (1983), Elbow (1973, 1981), Fisher and Smith (1976), Mullins (1977), Stott (1984), Van Til (1986), Zinsser (1985). Find your own approach to writing by writing and using those strategies that work for you.

## Muddling Through

Initial enthusiasm now has become hard work. Writing and rewriting are ongoing. Staying with the project becomes harder but increasingly necessary. Time seems slow and progress at times is minimal. Some days little is done, creativity is absent, and there are moments of despair. But there are also productive sessions! The paper is finally finished and ready for review by peers; and, then the work begins again. The struggle to just finish--to be rid of--and to write an excellent paper may dominate your thoughts. Will the desire for quality prevail?

Getting It On Paper. Many ways exist to get ideas and words to paper. When you write and where you do it is your choice. Perhaps it is easiest to say: Write any way you can anywhere you can and at any time, but do it and do it often! You can write on a yellow or white pad, in a notebook, on slips of paper, or on 3X5 or 5X8 cards. Will you use a pen, pencil, typewriter, word processor, or your favorite combination? You can lecture or dictate and later transcribe or have someone else transcribe. The possibilities are endless.

I do not use a typewriter since I discovered computers. I was initially hesitant and fearful of computers, but now the word processor is my preferred method of writing, supported by my written outlines and notes. I like to think while sitting in front of the screen and then write and rewrite. It is also ideal for editing and rearranging words, paragraphs, and sections of the paper. When I am struggling with an idea or where to begin, when I am not sure how to proceed, I often use pencil and paper to jot down thoughts, ideas, reminders, outline, sometimes sentences and paragraphs.

Getting words to paper varies among authors and types of writing to be done. Discover your writing style but seriously consider a word processor. They are now commonplace in homes, schools, and offices. The converted will not revert to the typewriter. One can see and play with words on a screen--for your eyes only--until the paper is ready. The advantage to this method far outweighs bothering a typist a dozen times and feeling the typist's accompanying but unspoken remark "Can't you get it right?". It also has distinct advantages over using bottles of "Wite·Out" and reams of paper.

Personal testimony abounds among those committed to word processing. Becker (1986), Van Til (1986), and Zinsser (1983, 1985), for example, extol the advantages for writers while presenting personal and readable accounts of the cognitive, physical, and psychological changes that have occurred since their conversion.

Rewriting and Revising. I continue to add sentences, paragraphs, and sections until I have a complete first draft. At some point I seriously begin to revise and reorganize, rearrange. Editing is an ongoing process. I will add and delete sentences, rewrite sentences, substitute words, rearrange paragraphs, move sections and continuously rewrite until it is finished. The paper is put away when a draft is finished. When I return I have distance, emotional neutrality and objectivity--a "fresh" perspective. Again I rewrite, revise, rearrange. I may go through this process a dozen times before I can let go.

Months may go by before I have a complete draft. Often my completed first draft may be a near final draft. I write in sections (e.g., Methods and Procedures) and revise while I am working on new sections. When I finally finish the paper I am usually into a fourth or fifth draft on most sections and just a second draft on the last sections that were written.

Staying With the Project. I am totally committed to the project and must stay with it. I try to work at it daily in only for 15 minutes but, more often, for two-hour or longer periods. Each day that I don't work on the paper I remind myself and often scold, question, and then insist that I make time and return to the task. I cannot let the project get away from me until the complete draft is finished and ready for someone else to critique.

Dealing with Feelings. I become obsessed with completing the paper and think about it most of the time. Somewhere in the middle I usually get depressed and irritable, anxious and impatient. More time is devoted to the project. I feel overwhelmed. Will it ever get done? It becomes drudgery. It seems the more I get into writing the more I need to know, to do, to read, to think, to check out. I often do more literature searching and reading until finally I think I have exhausted most possibilities and am satisfied.

Sharing. Finally, I have a paper that is finished. I share it with selected others. Often my wife, a school social worker who has excellent editorial skills, is the first to critically review it. I then share with colleagues who are willing to seriously read the paper and provide specific suggestions for improving the paper. Usually a week or two elapses before it is returned. I consider the reviewers' comments and then rewrite and revise once more.

## Endings

Finally, the paper is completed (at least for now). Relief, feelings of success and accomplishment, renewed energy to finish and submit to a journal, perhaps some lingering doubts about its quality--a rush of feelings surface. Much work has been expended, yet uncertainty awaits the author.

Submitting to a Journal. The journal has been chosen. Instructions for submission are reviewed and the paper with multiple copies is mailed. Now I wait for the editor's letter. I become aware of the months that have passed. My clock runs. I make inquiries if too much time passes. I am told it is still under review or a reviewer hasn't gotten it back yet; or they have had a split decision and it is currently under review by others; or sometimes the editor (or a staff person) realizes that a reviewer has kept the paper too long and a reminder is sent. I wait some more, get anxious, remain hopeful but grow weary of the waiting. I begin to second-guess myself.

Acceptance and Rejection. The editor's letter finally comes. Sometimes the result is rejection and sometimes it is acceptance. Almost always it is accompanied by a request, expectation, or demand for revision. Sometimes the proposed requested changes seem impossible. I read over the comments and suggestions a few times and then put it aside until my hurt feelings subside and my mind takes over and begins to process possible solutions. Phone calls to the editor usually help after I have digested the reviewers' and editor's comments.

Days, week, or months may pass before I tackle the paper. It all depends on how dejected I feel and how hard it will be to make the changes. I have waited as long as six months to make changes or, on occasion, extensive revisions, wondering if I would ever make them. The changes are made and returned to the same journal or resubmitted to another one. The wait begins again.

When papers are rejected I decide if the paper still has merit. Editors indicate if they will allow the paper to be resubmitted. If not, I consider other journals. I have, after reading the reviewers' comments, sent the paper to another journal on the same day without making one revision. But, more often, I revise and submit to the next journal on my list.

Seeing the Paper In Print. Finally the paper is an article; it is in print. A nice, quiet, good feeling. It is listed on my vita; a copy is sent to my personnel file. I share with others and then it is over, though there is recognition from the university (e.g., salary increase) and other colleagues.

Repeating the Cycle. The writing, researching, publishing cycle is ongoing. New projects are started while others are in process. Papers may be submitted but not yet considered, accepted but not revised, or ready to be published. I maintain an extensive filing system, collect numerous documents, and write notes, while trying to anticipate new projects and next steps for current projects.

## Mechanics and Style

Effective writing communicates to its intended audience. It is clear, organized, coherent, readable, and jargon free. The title and stated purpose accurately reflect the content. I am not an expert on writing but am dependent on others. Let me suggest some guides that may be useful. One, use the style manual recommended by the journal that you have targeted. Typically, the manual will be The Chicago Manual of Style (1982) or the APA Publication Manual (1983). Journal editors may instead send style sheets, suggest that you follow the journal's general style, or include instructions to contributors in recent issues. Two, follow a guide on nonsexist writing (e.g., Miller & Swift, 1988). Three, select one or more sources on writing style, perhaps the classic by Strunk and White (1979). Cook (1985) has written an excellent book to help authors edit their own writing. Four, be familiar with guides to word usage (e.g, Follett, 1966; Fowler, 1965; Hayakawa, 1968; Jordan, 1976; Runkel & Runkel, 1984). Five, keep a handy but simple and precise handbook of English (e.g., Corbett, 1987) by your side. Six, use a good dictionary (see Stainton, 1982, for a discussion of uses and a list of dictionaries).

Numerous sources have been suggested on writing strategies, mechanics and style, and authors' tools of the trade. There is content overlap among these multiple sources. Browse among them. Find your tools and keep them nearby. Additional references are listed in these sources, but look especially at Stainton (1982) for books on language, style manuals, and manuals on literary skills, and grammar and format.

## Conclusion

Writing for professional publication is difficult for most but it is possible to become a successful author. Obstacles to writing need to be overcome. Sacrifice is necessary. If you have a viable idea, plan, commitment, tenacity, and knowledge of the publishing "game", then success is likely. Begin and continue writing and rewriting! Writing a paper or book is an ongoing process, lasting weeks, months, and sometimes years. When you are ready, submit your paper. Don't give up if it is not accepted. Work some more and resubmit again. Authors also need to "let go", to finish, and move on.

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